



Cisco ASR 5000 Series inPilot Installation and Administration Guide

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Cisco ASR 5000 Series inPilot Installation and Administration Guide

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About this Guide

This document pertains to features and functionality that run on and/or that are related to the Cisco® ASR 5000 Chassis, formerly the Starent Networks ST40.

Conventions Used

The following tables describe the conventions used throughout this documentation.

Icon	Notice Type	Description
	Information Note	Provides information about important features or instructions.
	Caution	Alerts you of potential damage to a program, device, or system.
	Warning	Alerts you of potential personal injury or fatality. May also alert you of potential electrical hazards.
	Electro-Static Discharge (ESD)	Alerts you to take proper grounding precautions before handling a product.

Typeface Conventions	Description
Text represented as a <i>screen display</i>	This typeface represents displays that appear on your terminal screen, for example: Login:
Text represented as commands	This typeface represents commands that you enter, for example: show ip access-list This document always gives the full form of a command in lowercase letters. Commands are not case sensitive.
Text represented as a command variable	This typeface represents a variable that is part of a command, for example: show card slot_number slot_number is a variable representing the desired chassis slot number.
Text represented as menu or sub-menu names	This typeface represents menus and sub-menus that you access within a software application, for example: Click the File menu, then click New

Command Syntax Conventions	Description
{ keyword or <i>variable</i> }	Required keywords and variables are surrounded by grouped brackets. Required keywords and variables are those components that are required to be entered as part of the command syntax.

Command Syntax Conventions	Description
[keyword or <i>variable</i>]	Optional keywords or variables, or those that a user may or may not choose to use, are surrounded by square brackets.
	With some commands there may be a group of variables from which the user chooses one. These are called alternative variables and are documented by separating each variable with a vertical bar (also known as a pipe filter). Pipe filters can be used in conjunction with required or optional keywords or variables. For example: <pre>{ nonce timestamp }</pre> OR <pre>[count <i>number_of_packets</i> size <i>number_of_bytes</i>]</pre>

Contacting Customer Support

Use the information in this section to contact customer support.

For New Customers: Refer to the support area of <http://www.cisco.com> for up-to-date product documentation or to submit a service request. A valid username and password is required to this site. Please contact your local sales or service representative for additional information.

For Existing Customers with support contracts through Starent Networks: Refer to the support area of <https://support.starentnetworks.com/> for up-to-date product documentation or to submit a service request. A valid username and password is required to this site. Please contact your local sales or service representative for additional information.



IMPORTANT: For warranty and repair information, please be sure to include the Return Material Authorization (RMA) tracking number on the outside of the package.

Chapter 1

inPilot Overview

This chapter provides an overview of the inPilot application.

This chapter describes the following topics:

- [Introduction](#)
- [inPilot Architecture](#)
- [inPilot Deployment](#)
- [System Requirements](#)

Introduction

The inPilot is a Web-based application providing a unified reporting interface for diverse data from Cisco Systems In-line service and storage applications.

The inPilot application enables:

- Generating customized reports and comparison charts.
This release of inPilot only supports generating HTML-based historical canned reports displaying data in graphical—graphs/charts—and tabular formats. Reports for ad-hoc periods are not supported. For information on the report types supported, see the [Report Types](#) section.
- Analyzing the reporting data and enabling the operator to get a full understanding of the performance of the network, enabling operators to optimally configure and plan their network.
- Supporting distributed installation which allows to view reports from multiple sites.
- Rich visualization (Graphs/tabular form).
- Exporting reports in Microsoft Excel and Adobe PDF formats.

The inPilot application provides comprehensive and consistent set of statistics and customized reports, and report scheduling and distribution from chassis / in-line service product. For example, a subscriber's Quality of Experience, top 10 users, and so on.

The inPilot application provides reporting capability for Content Filtering Reporting Engine (CF-RE) data, bulk statistics, EDRs data from in-line service and storage applications. The inPilot application facilitates and enhances the operators' ability to simply and easily determine the health and usage of the network.



IMPORTANT: The inPilot receives the data in terms of EDRs which are generated based on the flow. As the EDRs are flow-based and the bulkstats is a real-time data, the volumes reported in the EDR are different from the volumes reported by bulkstats.

For more information on using the inPilot application to generate reports, see the *inPilot Online Help documentation*.

Report Types

The inPilot application supports generation of canned statistical reports that can be used to analyze network performance, and decide the policies for users, and identify the customer trends, network usage patterns, network categorization, etc. The reports can be per gateway, or multiple gateways (region), or for the overall network. The reports can be generated for the usage of different entities such as gateway, content type, etc on an hourly, daily, weekly, or monthly basis.

The typical canned reports that are supported for the inPilot application include:

- Historical summary reports (Daily/Weekly/Monthly)
 - Half-hourly Reports: Usage reporting for the specified time period
 - Daily Reports: Usage reporting for the past 24-hour period (midnight through midnight)

- Weekly Reports: Usage reporting for the past seven day period (Monday through Sunday)
- Monthly Reports: Usage reporting for the past 30-day period (1st day of the month through the last day of the month)
- Average Reports
- Top “N” Reports
- Statistical and analytical reports
- Bulkstats and KPI reports

The inPilot application provides the following reports:

- Traffic Analysis Report: The Traffic Analysis report provides the total usage traffic (including uplink and downlink traffic) details for the following application categories:
 - Filesharing
 - Web
 - IM
 - VOIP
 - Standard
 - Streaming
 - Tunnel
 - Gaming
 - Unclassified

The usage traffic is expressed in terms of megabytes (MB) or Megabits per second (Mbps) and percentage (%). The traffic can also be in gigabytes (GB) / kilobytes (KB) / bytes depending on the magnitude.

- Traffic Distribution Report: The Traffic Distribution report provides the summary of total traffic distribution for all the protocols application categories over a specified time period. The usage traffic is represented in GB/MB/KB/Bytes and percentage.
- Active Flow Count Report: The Active Flow Count report provides the details of traffic distribution flow count against the different application categories. This report also provides the summary of total number of flows in the EDR records.
- Unique Subscriber Hits Report: The Unique Subscriber Hits report provides an overview of the usage patterns of the entire subscriber population per protocol, for example, how many people are actually using VoIP.
- TopN versus Total Traffic Report: This report provides the summary of total usage traffic and Top N subscriber traffic for all the protocols over a specified time period. The usage traffic is represented in GB/MB/KB/Bytes and packets.
- TopN Subscribers Report: The TopN Subscribers report simply counts the number of bytes per subscriber for different time intervals. It displays the top 10/100/1000 subscribers for each hour (or just for the busy hour) and for each day/week/month/year. This report is displayed for all configured gateways.

After identifying the total amount of transferred data per subscriber, and identifying the top users, to understand the protocol and services breakdown for each subscriber, this report allows listing the different applications used by the top 10/100/1000 subscribers.
- TopN VCD Subscribers Report: The TopN VCD Subscribers report displays the top N subscribers based on their voice usage (voice duration) for Yahoo, MSN and Skype voice protocols. The summary report displays the voice summary (voice duration) for VoIP category.

- HTTP EDR based Reports: The inPilot application parses HTTP EDRs and generates the following reports based on the EDRs:
 - Uplink traffic per HTTP group / host name and HTTP content type
 - Downlink traffic per HTTP group / host name and HTTP content type
 - URL hits per HTTP group / host name and HTTP content type
 - Unique subscriber count per HTTP group / host name and HTTP content type
- Weekly Report: The weekly report provides details of the following:
 - Total traffic
 - Total traffic by category
 - VOIP Call Duration
 - Total unclassified traffic (TCP and UDP)
 - Top N subscribers
- Monthly Report: The monthly report provides the details of total traffic across the top N protocols / application categories in a month.
- DPI Report: The Deep Packet Inspection (DPI) reports are the canned statistical reports at the gateway level. You can configure the inPilot application to generate the reports for any of the available gateways.
- CF-RE Report: Content Filtering (CF) solution enables operators to filter HTTP and WAP requests from mobile subscribers based on the URLs in the requests, so that subscribers are inadvertently not exposed to universally unacceptable content and/or content inappropriate as per the subscribers preferences.

The CF-RE report provides the summary of traffic over CF categories, CF actions, and CF ratings. The CF actions that can be taken on the URL are as follows:

- allow
- discard
- redirect-url
- content-insert
- terminate-flow
- reply-code-terminate-flow

The CF ratings can be one of the following:

- dynamic
- static
- blacklisted

The CF-RE report also provides the list of top N subscribers and URLs based on their unique subscriber's hit count and total usage.

- Bulkstat Report: The Bulkstat report provides details of the processed bulk statistics from any application (PDSN, GGSN, SGSN, and so only) on the managed nodes in a timely manner. You can configure the inPilot application to generate the reports for any of the available gateways.
- KPI Report: The KPI report provides details of the KPIs for each selected schema. You can configure the inPilot application to generate the reports for any of the available gateways.



IMPORTANT: Please note that the subscriber's private data like Mobile Station Integrated Services Digital Network (MSISDN) will appear encrypted in all the subscribers reporting. Users with administrative privilege can only decrypt the MSISDNs using a shell script utility. For information on how to use this script, refer to the *inPilot Administration and Management* chapter in this guide.

Exporting Reports to Other File Formats

The inPilot application supports exporting reports to the following file formats:

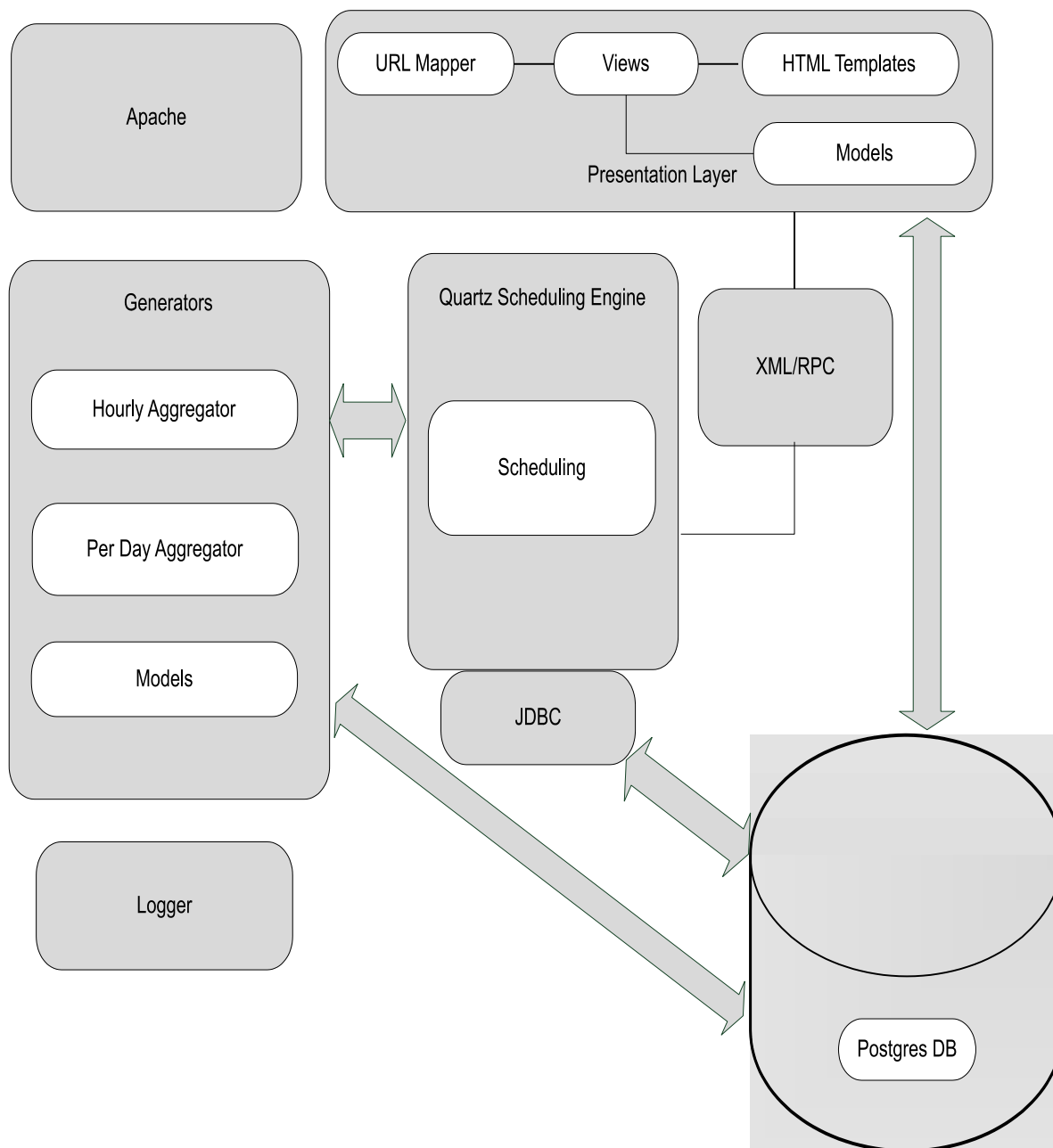
- Microsoft Excel format: To export a report to Microsoft Excel format, use the `get_excel_report` script. For more information about this script, refer to the *Generating Reports in Excel Format* section in the *inPilot Administration and Management* chapter of this guide.
- PDF format: To export a report to PDF format, in the **HOME** and **DPI REPORTS** tabs of the inPilot GUI, click the **Export to PDF** button. The PDF file is displayed in a new window and can be saved for future reference.

If there is no data available for a report, the **Export to PDF** button is disabled.

inPilot Architecture

The inPilot solution consists of two components — a server and a GUI client. The following figure shows a typical organization of the inPilot solution.

Figure 1. Internal Architecture of inPilot



The server components include:

- **DB Server:** This is the standard PostgreSQL 8.3 database server. This is started at the time of application startup.
- **Quartz Scheduling Engine:** This is the core of the inPilot reporting solution. It is used to schedule different tasks such as parsing of incoming data files (bulkstat, EDR, etc.), trigger various canned reports on a periodic basis, cleaning up of stored outdated data and files, and so on.

- **Generators:** These are python based scripts that are used for parsing various CSV files. The files are parsed to an extent where generated files (or data in database) themselves represent meaningful data. This is a very powerful concept introduced for faster processing of information.

The generators archive the files once they are parsed. In archival, the files are zipped and placed in the configured location.

- **Loggers:** The inPilot application uses various loggers so that application logs with various severities are made available for debugging purpose.

Some of the components at the client side include Django and Mod_python.

Distributed Architecture of inPilot

inPilot supports the distributed model to allow the deployment which enables network wide view or work load balancing. Newly introduced component, Remote Data Processor (RDP), plays the role of pre-processing the input files from gateways. One or more RDPs, installed separately on remote machines can be registered to a master inPilot and one RDP can process files from one or more gateways.

RDP periodically sends the intermediate data to registered master inPilot. The role of inPilot in such deployments is mostly for report generation, report viewing, RDP management and optionally data processing.

 **IMPORTANT:** RDP installation and registration is required only for network wide deployments. For standalone installation no RDP is required. For information on how to install the RDP, refer to the *Managing inPilot Installation* chapter of this guide.

 **IMPORTANT:** RDP and inPilot must be installed, upgraded, and uninstalled separately.

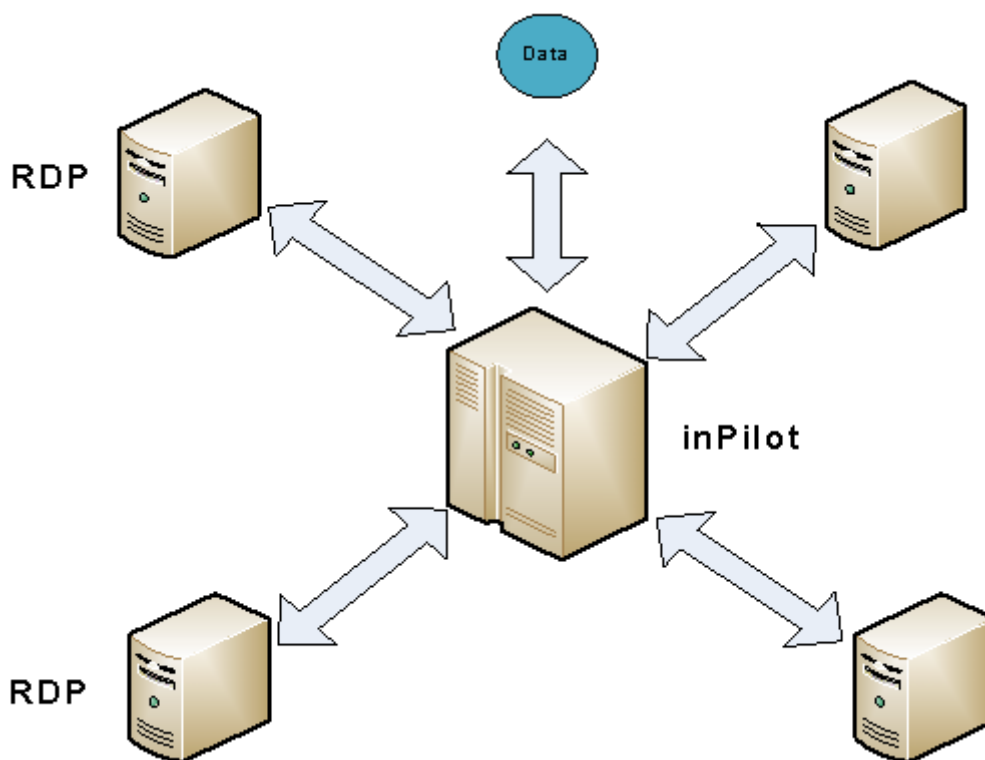
 **IMPORTANT:** Before registering RDP with the master inPilot, ensure that the RDP is installed and running.

 **IMPORTANT:** The RDP management like configuration and removal is possible from inPilot GUI only. For information on managing the RDPs, refer to the *inPilot Online Help*.

 **IMPORTANT:** For Bulkstat, there is no support for distributed model and all the bulkstat input files will be parsed by master inPilot only.

The following figure illustrates the distributed architecture of inPilot.

Figure 2. Distributed Architecture of inPilot



How RDP works with inPilot

This section describes how the RDP works with the inPilot application.

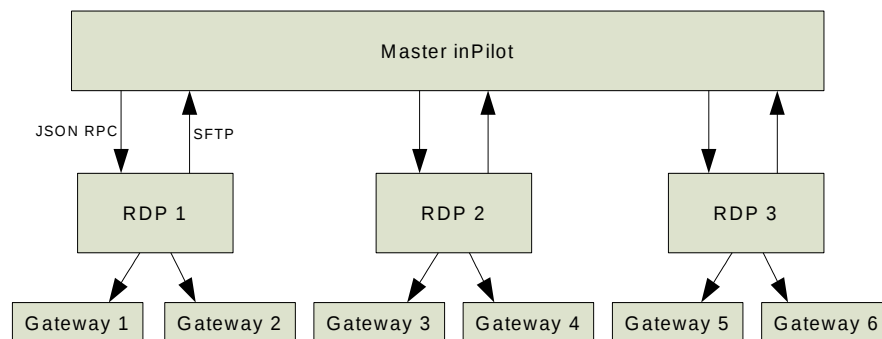
The RDP parses the raw data or EDR files from one or more GGSNs and populates the database for required reports. The RDP pre-processes the data and then periodically forwards them to the master inPilot through SFTP for report generation.



IMPORTANT: If the distributed model of inPilot is used, then the SFTP user name and password should be the same as the inPilot Administrator user's login name and password provided during installation. For information on configuring SFTP details, see the *inPilot Online Help* documentation.

Each of the RDP and inPilot will be assigned a unique ID during installation and will be used for identification of each RDP along with its gateway and data.

Figure 3. *inPilot with RDPs in Distributed Model*



Each of the registered RDPs will form a new region. RDP region can be a child of the root of the inPilot (NOC) or can be the child of another region. However, all the gateways associated with a RDP will always be the children of RDP region.

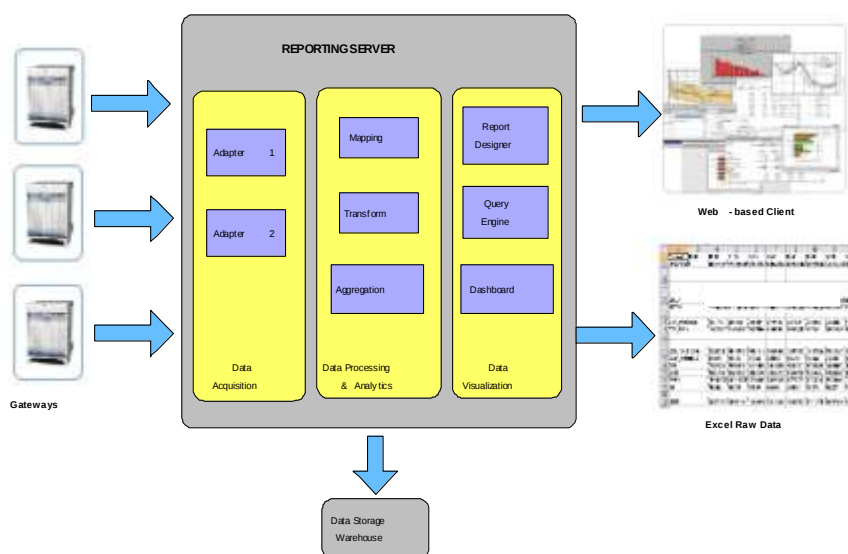


IMPORTANT: Only single inPilot can communicate with an RDP simultaneously.

inPilot Deployment

The following figure illustrates how the inPilot reporting server interacts with the gateways and generates the reports.

Figure 4. End-to-end Component Mapping



The inPilot reporting server collects the EDRs, and bulkstats from the gateways and processes the incoming data files and presents reports on Web-based GUI. The inPilot application can generate reports in Excel and PDF formats, and present them to users on a request basis.

System Requirements

This section identifies the minimum system requirements for inPilot.



IMPORTANT: The hardware required for inPilot may vary depending on incoming EDR generation, subscriber count, and number of gateways.

- Sun Microsystems Netra™ X4450 server
 - Quad-Core Intel Xeon E7340 (2 * 4MB L2, 2.40 GHz, 1066 MHz FSB)
 - 32GB RAM
 - 8 * 300GB 10K RPM SAS disks
 - Four 10/100/1000 Ethernet ports, 2 PCI-X, 8 PCIe
 - 4 redundant AC power supplies
 - Intelx64 core 4 socket
- Operating Environment:
 - Sun Solaris 10
- ZFS is the recommended file system with two ZFS pools.

One pool with minimal capacity, two disks mirrored for OS only. The remaining disks are to be configured in one single zpool.



IMPORTANT: The current inPilot release 10.0.x works with StarOS version 9.0.

Chapter 2

Configuring Chassis for inPilot

This chapter describes the configurations required to source data for the inPilot application.



IMPORTANT: These configurations are on the chassis.

For more information on ECS configurations, see the *Enhanced Charging Services Administration Guide*.

This chapter describes the following topics:

- [Initial Configuration](#)
- [Configuration](#)

Initial Configuration

If the configurations described in this section are not already available on the system, these must be configured.

Initial configuration steps:

- Step 1** Ensure that ECS license is installed on the system.
- Step 2** Create the ECS administrative user account as described in the [Creating the ECS Administrative User Account](#) section.
- Step 3** Enable Active Charging as described in the [Enabling Active Charging](#) section.
- Step 4** Create Active Charging Service as described in the [Creating the Active Charging Service](#) section.
- Step 5** Save your configuration as described in the *Verifying and Saving Your Configuration* chapter.



IMPORTANT: Commands used in the configuration examples in this section provide base functionality to the extent that the most common or likely commands and/or keyword options are presented. In many cases, other optional commands and/or keyword options are available. Refer to the *Command Line Interface Reference* for complete information regarding all commands.

Installing the ECS License

To enable and configure ECS functionality on the system you must obtain and install one of the following licenses:

- [600-00-7526] *Enhanced Charging Bundle 1 1k Sessions* license
- [600-00-7574] *Enhanced Charging Bundle 2 1k Sessions* license—to enable and configure Diameter and DCCA functionality with ECS

For information on how to install licenses, see the *Managing License Keys* section of the *Software Management Operations* chapter in the *Administration and Configuration Guide*.

Creating the ECS Administrative User Account

At least one administrative user account that has ECS functionality privileges must be configured on the system. This is the account that is used to log on and execute ECS-related commands. For security purposes, it is recommended that these user accounts be created along with general system functionality administration.

Use the following configuration example to create the ECS Administrative user account:

```
configure
    context local
```

```
administrator <user_name> password <password> ecs
end
```

Notes:

- Aside from having ECS capabilities, an ECS Administrator account also has the same capabilities and privileges as any other system-level administrator account.
- You can also create system ECS user account for a config-administrator, operator, or inspector. ECS accounts have all the same system-level privileges of normal system accounts except that they have full ECS command execution capability. For example, an ECS has rights to execute every command that a regular administrator can in addition to all of the ECS commands.
- Note that only Administrator and Config-administrator-level users can provision ECS functionality. Refer to the *Configuring System Settings* chapter of the *System Administration and Configuration Guide* for additional information on administrative user privileges.

Enabling Active Charging

Active Charging must be enabled before configuring charging services.

Use the following configuration example to enable Active Charging:

```
configure
require active-charging optimized-mode
context local
interface <interface_name>
    ip address <ip_address> <ip_mask>
exit
server ftpd
end
```

Notes:

- ACS must be enabled in Optimized mode, wherein ACS functionality is managed by SessMgrs. The **require active-charging optimized-mode** command enables ACS in Optimized mode.
- The **require active-charging optimized-mode** command must be a part of the boot configuration. If configured after booting, the configuration must be saved and the system rebooted for the change to take effect.

Creating the Active Charging Service

Use the following configuration example to create an Active Charging Service:

```
configure
  active-charging service <service_name> [ -noconfirm ]
end
```

Configuration

The following is the sequence of configurations necessary to source data to the inPilot application:

- Step 1** Activate P2P analyzer as described in the [Activating P2P Analyzer](#) section.
- Step 2** Configure EDR flow format as described in the [Configuring the EDR Flow Format](#) section.
- Step 3** Configure routing ruledefs and rulebase for deep-packet inspection as described in the [Configuring Deep Packet Inspection](#) section.
- Step 4** Configure EDR module as described in the [EDR Module Configuration](#) section.
- Step 5** Configure user as described in the [Configuring EDR Download Permission](#) section.
- Step 6** Configure bulkstat schemas as described in the [Configuring Bulkstat Schemas](#) section.
- Step 7** Load the bulkstats configuration file to the gateway as described in the [Loading Bulkstats Configuration File](#) section.
- Step 8** Save your configuration as described in the *Verifying and Saving Your Configuration* chapter.

Activating P2P Analyzer

Use the following configuration example to activate P2P protocol detection:

```
configure

  active-charging service <service_name>

    p2p-detection protocol all

    rulebase <rulebase_name>

      p2p dynamic-flow-detection

    end
```

Notes:

- P2P protocol detection must be activated only within rulebases used by the APNs for which P2P detection is applicable. P2P detection must not be applied to the rulebases used for APNs where such reporting is either not useful or is not possible.

Configuring the EDR Flow Format

Use the following configuration example to configure the EDR format generated for flows:

```
configure
```

```

active-charging service <service_name>

    edr-format <edr_format_name> [ -noconfirm ]

        attribute <attribute> { [ format { MM/DD/YY-HH:MM:SS | MM/DD/YYYY-HH:MM:SS
| YYYY/MM/DD-HH:MM:SS | YYYYMMDDHHMMSS | seconds } ] [ localtime ] | [ { ip |
tcp } { bytes | pkts } { downlink | uplink } ] priority <priority> }

        rule-variable <protocol> <rule> priority <priority>

        event-label <event-label> priority <priority>

    end

```

Notes:

- For information on EDR format configuration and rule variables, refer to the *EDR Format Configuration Mode Commands* chapter of the *Command Line Interface Reference*.

The following is a sample EDR configuration.

configure

```

active-charging service ecs_svc1

    edr-format edr_flow_format

        attribute sn-start-time format seconds priority 10

        attribute sn-end-time format seconds priority 20

        attribute radius-calling-station-id priority 30

        rule-variable ip server-ip-address priority 60

        attribute sn-server-port priority 70

        attribute sn-app-protocol priority 80

        attribute sn-parent-protocol priority 81

        rule-variable ip protocol priority 82

        rule-variable p2p protocol priority 90

        attribute sn-volume-amt ip bytes uplink priority 100

        attribute sn-volume-amt ip bytes downlink priority 110

        attribute sn-volume-amt ip pkts uplink priority 120

        attribute sn-volume-amt ip pkts downlink priority 130

        rule-variable bearer 3gpp charging-id priority 140

        rule-variable bearer 3gpp imei priority 141

```

```
rule-variable bearer 3gpp rat-type priority 142
rule-variable bearer 3gpp user-location-information priority 143
rule-variable traffic type priority 160
rule-variable voip-duration priority 170
end
```

The following is a sample HTTP EDR configuration.

```
configure
```

```
active-charging service ecs_svcl
edr-format edr_http_format
attribute sn-start-time format seconds priority 10
attribute sn-end-time format seconds priority 20
attribute radius-calling-station-id priority 30
rule-variable ip server-ip-address priority 50
rule-variable http host priority 70
rule-variable http content type priority 80
attribute transaction-downlink-bytes priority 90
attribute transaction-uplink-bytes priority 100
attribute transaction-downlink-packets priority 110
attribute transaction-uplink-packets priority 120
rule-variable bearer 3gpp charging-id priority 130
end
```

Verifying your Configuration

To verify your configuration, in the Exec Mode, enter the following command:

```
show active-charging edr-format name <edr_format_name>
```

Configuring Deep Packet Inspection

Configuring Routing Rule Definition

Use the following configuration example to create and configure a routing ruledef:

```
configure
  active-charging service <service_name>
    ruledef <ruledef_name>
      <protocol> <expression> <operator> <condition>
      rule-application routing
    end
```

Notes:

- The **rule-application routing** command specifies the ruledef type. If not specified, by default, the system configures the ruledef as a charging ruledef.
- For information on all the protocol types, expressions, operators, and conditions supported, refer to the *Ruledef Configuration Mode Commands* chapter of the *Command Line Interface Reference*.
- Up to 10 rule matches can be configured in one ruledef.

Verifying your Configuration

To verify your configuration, in the Exec Mode, enter the following command:

```
show active-charging ruledef routing
```

Configuring Rulebase

Use the following configuration example to route traffic to the appropriate analyzer within each rulebase where the reporting is applicable.

```
configure
  active-charging service <service_name>
    rulebase <rulebase_name> [ -noconfirm ]
      route priority <priority> ruledef <ruledef_name> analyzer <analyzer> [
description ]
      rtp dynamic-flow-detection
```

```
    flow end-condition timeout normal-end-signaling session-end edr
    <edr_format_name>

    end
```

The following is a sample rulebase configuration.

```
configure
```

```
    active-charging service ecs_svc1

    rulebase p2p-rb

        flow end-condition timeout normal-end-signaling session-end edr
        edr_flow_format

            action priority 4 ruledef rtsp_setup charging-action standard
            action priority 5 ruledef rtsp_play charging-action standard
            action priority 6 ruledef rtsp_teardown charging-action standard
            action priority 7 ruledef rtsp_anymatch charging-action standard
            action priority 10 ruledef sip_anymatch charging-action handshake
            action priority 11 ruledef rtp-anymatch charging-action handshake
            action priority 12 ruledef udp-anymatch charging-action handshake
            action priority 13 ruledef tcp-anymatch charging-action handshake
            action priority 100 ruledef ip-anymatch charging-action handshake
            route priority 60 ruledef sip-src analyzer sip
            route priority 65 ruledef sip-dst analyzer sip
            route priority 70 ruledef rtsp-src analyzer rtsp
            route priority 75 ruledef rtsp-dst analyzer rtsp
            route priority 250 ruledef sdp_route analyzer sdp
            rtp dynamic-flow-detection

            edr transaction-complete http edr-format edr_http_format

            edr voip-call-end edr-format edr_flow_format

        p2p dynamic-flow-detection

    end
```

Verifying your Configuration

To verify your configuration, in the Exec Mode, enter the following command:

```
show active-charging rulebase name <rulebase_name>
```

Configuring Charging Action

Use the following configuration example to configure a charging action:

```
configure
  active-charging service <service_name>
    charging-action <charging_action_name> [ -noconfirm ]
      content-id <content_id>
      retransmissions-counted
      billing-action [ edr <edr_format> [ wait-until-flow-ends ] | egcdr |
exclude-from-uhrs | radius ] +
      flow idle-timeout <idle_timeout>
    end
```

Verifying your Configuration

To verify your configuration, in the Exec Mode, enter the following command:

```
show active-charging charging-action name <charging_action_name>
```

EDR Module Configuration

Use the following configuration example to configure the EDR module:

```
configure
  context <context_name>
    edr-module active-charging-service
      file name <file_name> rotation volume <file_size_bytes> rotation time
<file_complete_seconds> storage-limit <storage_limit_bytes> headers reset-
indicator edr-format-name trap-on-file-delete compression gzip file-sequence-
number rulebase-seq-num
```

```

    cdr [ push-interval <interval> | remove-file-after-transfer | transfer-
mode { pull | push primary { encrypted-url <enc_url> | url <url> } [ secondary {
encrypted-secondary-url <enc_sec_url> | url <sec_url> } ] } + | use-harddisk ]

    end

```

Notes:

- The `<context_name>` must be the context specified for accounting.
- The **cdr use-harddisk** command is only available on the ASR 5000 platform.
- The **cdr use-harddisk** command specifies storing files on the hard disk. The reporting server will download these files through the SPIO interface on the SMC and will delete the files after successful retrieval.
- The **edr-format-name** keyword must be configured to distinguish between different EDRs.
- The files will be compressed to save storage and transmission bandwidth.

Verifying your Configuration

To verify your configuration, in the Exec Mode, enter the following command:

```
show active-charging edr-udr-file statistics
```

Pushing EDR/UDR Files Manually

To manually push EDR/UDR files to the configured L-ESS, in the Exec mode, enter the following command:

```
cdr-push { all | local-filename <file_name> }
```

Notes:

- Before you can use this command, in the EDR/UDR Configuration Mode, the CDR transfer mode and file locations must be set to push.
- `<file_name>` must be absolute path of the local file to push.

Configuring EDR Download Permission

Use the following configuration example to configure EDR download permission:

```

configure

context local

    administrator <administrator_id> password <password> ftp nocli

end

```

Notes:

- The user must be configured in the local context with administrative privileges to download and delete EDRs from the hard disk. The **ftp nocli** options restrict access to FTP only.

Configuring Bulkstat Schemas

Ensure that the following checks are made prior to configuring bulkstat schemas.

- FTP must be enabled on the inPilot server.
To enable the FTP daemon, use the following command:
/usr/sbin/svcadm/ enable ftp
To disable the FTP daemon, use the following command:
/usr/sbin/svcadm/ disable ftp
- Bulkstat files FTPed from gateways must have the following file naming convention:
bulkstat%date%%time%.txt
Where, date format = *yyyymmdd* and Time format = *hhmmss*
Example: *bulkstat20100206150002.txt*
- Bulkstats files must be FTPed at the following location from the gateway:
\$STARBI_HOME/server/data/\$gwname/bs
Where \$STARBI_HOME = inPilot installation directory
\$gwname = Gateway name

Use the following configuration example to configure bulkstat schemas:

```
configure
bulkstats collection
bulkstats mode
sample-interval <minutes>
transfer-interval <minutes>
file <file_number>
header format <format_string>
remotefile format <format_string>
receiver <ip_address> primary mechanism ftp login <user_name> password
<password>
<module> schema <schema_name> format <format_string>
end
```

Notes:

- *<ip_address>* specifies the IP address of the inPilot server.
- The default file transfer mechanism is ftp.
- For more information on commands for bulkstats configuration on the chassis, refer to the *Bulk Statistics Configuration Mode Commands* chapter in the *Command Line Interface Reference Guide*.
- For more information on variable descriptions for bulkstats schema configuration, refer to the *Statistics and Counters Reference Guide* or *WEM Online Help*.

For viewing the sample bulkstats configuration file, refer to *Sample Bulkstats Schema Configuration* appendix.

Loading Bulkstats Configuration File

To load the bulkstats configuration file to the gateway, use the following command:

configure [*File URL*]

Where, *File URL* is the path of bulkstats configuration file.

Chapter 3

Managing inPilot Installation

This chapter describes how to install, upgrade, and uninstall the inPilot application.

The following topics are explained in this chapter:

- [Installing inPilot](#)
- [Upgrading inPilot](#)
- [Uninstalling inPilot](#)



IMPORTANT: The procedures for installation, upgrade, and uninstallation of inPilot and RDP remain the same.

Installing inPilot

This section provides instructions on how to install the inPilot application.



IMPORTANT: Make sure that your system meets the minimum requirements as indicated in the *System Requirements* section in the *inPilot Overview* chapter of this guide.

The following inPilot components are installed by inPilot installer.

- Apache v2.2.11 with mod_python v3.3.1
- Python v2.6.4
- Postgres v 8.2.0
- Django v1.0.2
- JRE v1.6.0_12
- Quartz Scheduler v1.6.4

inPilot uses the following python/django packages:

- django_pagination-1.0.5
- django_sorting-0.1
- django_timezones-0.1
- psycopg2-2.0.8
- pytz-2009f

Setting the Database Environment Strings

Prior to installing the inPilot components onto the server hardware, there are numerous system environment configuration settings that should be configured. While PostgreSQL will be installed during the installation procedure, these settings must be configured manually.



WARNING: Failure to configure these settings may cause data loss and will minimally cause errors in the operation.

Add the following values to system file in the */etc/system* directory if they are not present and restart the system before continuing with the installation of the inPilot components.

```
set msgsys:msginfo_msgmnb=65536
set msgsys:msginfo_msgtql=1024
set shmsys:shminfo_shmmax=1300000000
```

```

set shmsys:shminfo_shmmin=1
set shmsys:shminfo_shmmni=256
set shmsys:shminfo_shmseg=256
set semsys:seminfo_semmap=256
set semsys:seminfo_semmni=512
set semsys:seminfo_semmns=512
set semsys:seminfo_semmsl=270

```

Pre-installation Checks

Ensure the following checks are made before installing the inPilot application.

- Step 1** The recommended filesystem for installation is ZFS. If installation is performed on any other filesystem, a warning message appears indicating the recommended filesystem.
- Step 2** inPilot must be installed as a **root** user on the system. Installation with other user privileges is not recommended.
- Step 3** Make sure no other Apache web server is running on the port being used for installation (default port is 8080). If it is, stop it before proceeding with the installation or provide a different port for Apache server. Check if an application is running on a given port by entering the following command:
- ```
netstat -an | grep <port number>
```
- Step 4** Make sure no other Postgres server is running on the port being used for installation (default port is 5432). If it is, stop it before proceeding with the installation or provide a different port for Postgres server. Check if an application is running on a given port by entering the following command:
- ```
netstat -an | grep <port number>
```
- Step 5** Make sure no other server is running on the port being used for installation for XML-RPC (default port is 9999). If it is, stop it before proceeding with the installation or provide a different port for XML-RPC server. Check if an application is running on a given port by entering the following command:
- ```
netstat -an | grep <port number>
```
- Step 6** inPilot installation will ask for the Administrator login and Administrator Primary Group. Administrator login is the OS level administrator of inPilot who will own the inPilot installation. Administrator Primary Group is the user group of inPilot to allow the interaction with external entities like L-ESS.
- Step 7** L-ESS must be stopped before starting inPilot installation / upgrade.
- Step 8** If the L-ESS is installed as a **root** user, the ownership of L-ESS installation should be changed from **root** to **non-root** user. This new user must be added to inPilot Group. For example, if L-ESS is initially running as **root** and new user created is *essadmin*, then perform the following sequence of operations.

**Step a** Stop L-ESS.

**Step b** Add the user *essadmin* to inPilot group by entering the following command as **root** user -  
`usermod -G <inPilot Group> essadmin`

**Step c** Verify whether the user is added correctly to inPilot group using the command **groups**  
`essadmin`

**Step d** Change the ownership of L-ESS installation to this new user using the following command -  
`chown -R essadmin <LESS installation directory>`

**Step e** Login as *essadmin* with the command **su essadmin**

**Step f** Start L-ESS again.

**Step 9** If the L-ESS is installed as a **non-root** user say *essadmin*, this user should be added to inPilot Group.

**Step a** Stop L-ESS

**Step b** Add the user *essadmin* to inPilot group by running the following command as **root**- `usermod -G <inPilot Group> essadmin`

**Step c** Log off and relogin again as *essadmin* for the group addition to come into effect.

**Step d** Start the L-ESS application to continue pulling the EDR files from chassis and forwarding it to inPilot.

**Step 10** Similarly for the Bulkstats (BS), before pushing BS files from chassis to inPilot, the corresponding user should be added to inPilot group.

**Step 11** The recommended user/group settings for inPilot are:

- NIS-USER<->NIS-GROUP
- NON-NIS-USER<->NON-NIS-GROUP

The NIS users should always be associated with NIS Groups. The non NIS users should be associated with Non NIS groups. Also, it is recommended to have separate non NIS users for inPilot installation.

## inPilot Installation

The inPilot installation files are distributed as a single compressed file with a **.tar.gz** extension.



**IMPORTANT:** The inPilot application supports both Solaris-Sparc and Solaris-x86 platforms. The installable tar file names help in identifying the platform. For example, `starbi_x.x.x_sparc.tar.gz` indicates that this file is for Solaris-Sparc platform. Similarly, `starbi_x.x.x_x86.tar.gz` indicates that this file is for Solaris-x86 platform.

For information on downloading the appropriate inPilot package for your requirements, contact your sales representative.

The inPilot application and its components can be installed using one of the following two methods.

- [Installing inPilot Using Scriptbased Installer](#)
- [Installing inPilot Using GUIConsole based Installer](#)

## Installing inPilot Using Script-based Installer



**IMPORTANT:** To perform the installation procedure explained in this section, you must be logged into the server as a **root** user.

After copying the installation file to the server, use the following procedure to install the inPilot application.

**Step 1** Change to the directory in which the file is stored.

**Step 2** Unzip the file by entering the following command:

```
gunzip starbi_x.x.x_x.tar.gz
```

x.x.x is the version of the inPilot installation file.



**IMPORTANT:** After un-zipping the installation file, set the permission of .tar file to 700 using the following command and then continue with the installation process. - **chmod 700 starbi\_<release no>\_<platform>.tar**

**Step 3** Untar the file by entering the following command:

```
tar -xvf starbi_x.x.x_x.tar
```

Decompressing the installation file results in the following files:

- *README*: A text file containing information pertaining to the release.
- *install\_starbi*: A script to install the inPilot application.
- *starbi.tar*: A compressed file containing all the application files required for inPilot installation.
- *inst*: A GUI/Console based installer to install the inPilot application.
- *In\_Pilot\_Installer.bin*: The executable used by *inst* to install inPilot application.

**Step 4** Execute the script by entering the following command:

```
./install_starbi
```



**IMPORTANT:** The installation script checks the disk space in the system. If the available disk space is lesser, then the script will give an error and abort the installation process.

**Step 5** Respond to the on-screen prompts with the help of inputs given in the following table and configure various parameters as required.

| Parameter                          | Description | Default Value |
|------------------------------------|-------------|---------------|
| System Environment Variable Prompt |             |               |

| Parameter                                                                                                                                                                                                                                                                                                                                                                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Default Value       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                                                                                                                                                                                                                                                                                                                                                                                            | This dialog or script asks user to add variable values in <code>/etc/system</code> file and restart the system.<br>For more information, refer to the <a href="#">Setting the Database Environment Strings</a> section.                                                                                                                                                                                                                                                                                                                                     | N/A                 |
| inPilot Installation                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |
| Want to proceed                                                                                                                                                                                                                                                                                                                                                                            | Type <b>(y)es</b> to proceed with the installation of inPilot application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | yes                 |
| inPilot Installation Directory                                                                                                                                                                                                                                                                                                                                                             | Type the directory on the server in which the inPilot application is to be installed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <current_directory> |
| <p>The following warning appears if the user performs installation on non-ZFS (UFS) partition path. ZFS is the recommended filesystem for installation.</p> <pre>Warning! Path provided lies in ufs filesystem.  Recommended filesystem for inpilot is zfs.  Do you still want to continue? [no] ?</pre> <p>Type <b>(y)es</b> or <b>(n)o</b> to proceed with the inPilot installation.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | no                  |
| Do you want to install inPilot or RDP                                                                                                                                                                                                                                                                                                                                                      | Type <b>i</b> or press <b>Enter</b> to install the inPilot application.<br>To install RDP type <b>r</b> . Refer to the following table for the parameters associated with the RDP installation.                                                                                                                                                                                                                                                                                                                                                             | inPilot             |
| Administrator login                                                                                                                                                                                                                                                                                                                                                                        | <p>Type an administrator name for the Operating System (OS) level administrator of inPilot.</p> <hr/> <p> <b>IMPORTANT:</b> The Administrator user created should be manually activated with a password once the inPilot installation is complete. This can be done by entering the following command as <b>root</b> user: <b>passwd &lt;adminusername&gt;</b> Upon executing this command, the user will be asked to enter a suitable administrator password.</p> <hr/> | muradmin            |
| Administrator uid                                                                                                                                                                                                                                                                                                                                                                          | <p>Type the Administrator User ID for the inPilot Administrator login.</p> <hr/> <p> <b>IMPORTANT:</b> This input will be asked only if the Administrator login name provided does not exist.</p> <hr/>                                                                                                                                                                                                                                                                  | 100014              |

| Parameter                                 | Description                                                                                                                                                                                                                                                                                                                                                                            | Default Value                 |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Administrator Primary Group               | Type the Primary Group name for the Administrator.<br><br> <b>IMPORTANT:</b> If the Administrator login name provided already exists, the Primary Group of this login will be considered as the <b>inPilot User Group</b> . Otherwise, the user will be asked to enter the Primary Group information. | inPilot                       |
| Postgres Login                            | This is a read-only parameter. The Postgres login name will be the same as the Administrator login name provided earlier.                                                                                                                                                                                                                                                              | N/A                           |
| Postgres Password                         | Type the password for accessing the PostgreSQL database.                                                                                                                                                                                                                                                                                                                               | N/A                           |
| Postgres Port                             | Type the port number over which PostgreSQL communication will occur with inPilot.<br><br> <b>IMPORTANT:</b> Be sure no other Postgres server is running on configured port.                                                                                                                           | 5432                          |
| Apache Port                               | Type the port number over which Apache web server communication will occur with inPilot.<br><br> <b>IMPORTANT:</b> Be sure no other Apache web server is running on port which you are using while installation. If the port is being used, abort the installation.                                 | 8080                          |
| RPC Port                                  | Type the port number over which XML-RPC server communication will occur with inPilot.<br><br> <b>IMPORTANT:</b> Be sure no other XML-RPC server is running on configured port.                                                                                                                      | 9999                          |
| Bulkstat File Transfer Interval [seconds] | Enter the file transfer interval for bulk statistics in seconds.                                                                                                                                                                                                                                                                                                                       | 900                           |
| Bulkstat Sample Interval [seconds]        | Enter the sample interval for bulk statistics in seconds.                                                                                                                                                                                                                                                                                                                              | 300                           |
| Archive Directory                         | Type the directory path for archiving parsed files.                                                                                                                                                                                                                                                                                                                                    | <inpilot_install_dir>/archive |

| Parameter                                   | Description                                                                                                                                                                                                                                                                                                                                                                                                    | Default Value |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|                                             | <p>The following warning appears if the user performs installation on non-ZFS (UFS) partition path. ZFS is the recommended filesystem for installation.</p> <pre>Warning! Path provided lies in ufs filesystem.</pre> <pre>Recommended filesystem for inPilot is zfs.</pre> <pre>Do you still want to continue? [no] ?</pre> <p>Type <b>(y)es</b> or <b>(n)o</b> to proceed with the inPilot installation.</p> | no            |
| inPilot Configuration Confirmation          |                                                                                                                                                                                                                                                                                                                                                                                                                |               |
| Proceed with installation                   | Type <b>(y)es</b> to proceed with inPilot installation.                                                                                                                                                                                                                                                                                                                                                        | yes           |
| Do you want to start the inPilot components | Type <b>(y)es</b> to start the inPilot components immediately after installation.                                                                                                                                                                                                                                                                                                                              | yes           |

| Parameter                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Default Value |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Administrator login         | <p>Type an administrator name for the Operating System (OS) level administrator of RDP.</p> <hr/> <p> <b>IMPORTANT:</b> The Administrator user created should be manually activated with a password once the inPilot installation is complete. This can be done by entering the following command as <b>root</b> user: <b>passwd &lt;adminusername&gt;</b> Upon executing this command, the user will be asked to enter a suitable administrator password.</p> <hr/> | muradmin      |
| Administrator uid           | <p>Type the Administrator User ID for the inPilot Administrator login.</p> <hr/> <p> <b>IMPORTANT:</b> This input will be asked only if the Administrator login name provided does not exist.</p> <hr/>                                                                                                                                                                                                                                                              | 100014        |
| Administrator Primary Group | <p>Type the Primary Group name for the Administrator.</p> <hr/> <p> <b>IMPORTANT:</b> If the Administrator login name provided already exists, the Primary Group of this login will be considered as the inPilot User Group. Otherwise, the user will be asked to enter the Primary Group information.</p> <hr/>                                                                                                                                                     | inPilot       |

| Parameter                                                                                                                                                                                                                                                                                                                                                          | Description                                                                                                                                                                                                                                                                                                                                      | Default Value             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Postgres Login                                                                                                                                                                                                                                                                                                                                                     | This is a read-only parameter. The Postgres login name will be the same as the Administrator login name provided earlier.                                                                                                                                                                                                                        | N/A                       |
| Postgres Password                                                                                                                                                                                                                                                                                                                                                  | Type the password for the Postgres database administration.                                                                                                                                                                                                                                                                                      | N/A                       |
| Postgres Port                                                                                                                                                                                                                                                                                                                                                      | Type the port number over which PostgreSQL communication will occur with RDP.<br><br> <b>IMPORTANT:</b> Be sure no other Postgres server is running on configured port.                                                                                         | 5432                      |
| Apache Port                                                                                                                                                                                                                                                                                                                                                        | Type the port number over which Apache web server communication will occur with RDP.<br><br> <b>IMPORTANT:</b> Be sure no other Apache web server is running on port which you are using while installation. If the port is being used, abort the installation. | 8080                      |
| RPC Port                                                                                                                                                                                                                                                                                                                                                           | Type the port number over which XML-RPC server communication will occur with RDP.<br><br> <b>IMPORTANT:</b> Be sure no other XML-RPC server is running on configured port.                                                                                    | 9999                      |
| Bulkstat File Transfer Interval [seconds]                                                                                                                                                                                                                                                                                                                          | Enter the file transfer interval for bulk statistics in seconds.                                                                                                                                                                                                                                                                                 | 900                       |
| Bulkstat Sample Interval [seconds]                                                                                                                                                                                                                                                                                                                                 | Enter the sample interval for bulk statistics in seconds.                                                                                                                                                                                                                                                                                        | 300                       |
| Archive Directory                                                                                                                                                                                                                                                                                                                                                  | Type the directory path for archiving parsed files.                                                                                                                                                                                                                                                                                              | <rdp_install_dir>/archive |
| <p>The following warning appears if the user performs installation on non-ZFS (UFS) partition path. ZFS is the recommended filesystem for installation.</p> <pre>Warning! Path provided lies in ufs filesystem.  Recommended filesystem for inpilot is zfs.  Do you still want to continue? [no] ?  Type (y)es or (n)o to proceed with the RDP installation.</pre> |                                                                                                                                                                                                                                                                                                                                                  | no                        |
| RDP Configuration Confirmation                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                  |                           |

| Parameter                               | Description                                                                   | Default Value |
|-----------------------------------------|-------------------------------------------------------------------------------|---------------|
| Proceed with installation               | Type <b>(y)es</b> to proceed with RDP installation.                           | yes           |
| Do you want to start the RDP components | Type <b>(y)es</b> to start the RDP components immediately after installation. | yes           |

After you have provided the inputs, the installation script starts the inPilot components and you receive a message indicating that inPilot installation is completed.

## Installing inPilot Using GUI/Console based Installer



**IMPORTANT:** To perform the installation procedure explained in this section, you must be logged into the server as a **root** user.

Follow the instructions below to install inPilot using the GUI/Console based installation wizard.

**Step 1** Change to the directory in which the file is stored.

**Step 2** Unzip the file by entering the following command:

```
gunzip starbi_x.x.x_x.tar.gz
```

x.x.x is the version of the inPilot installation file.

**Step 3** Un-tar the file by entering the following command:

```
tar -xvf starbi_x.x.x_x.tar
```

Decompressing the installation file results in the following files:

- *README*: A text file containing information pertaining to the release.
- *install\_starbi*: A script to install the inPilot application.
- *starbi.tar*: A compressed file containing all the application files required for inPilot installation.
- *inst*: A GUI/Console based installer to install the inPilot application.
- *In\_Pilot\_Installer.bin*: The executable used by *inst* to install inPilot application.

**Step 4** Execute the script by entering the following command:

```
./inst [MODE]
```

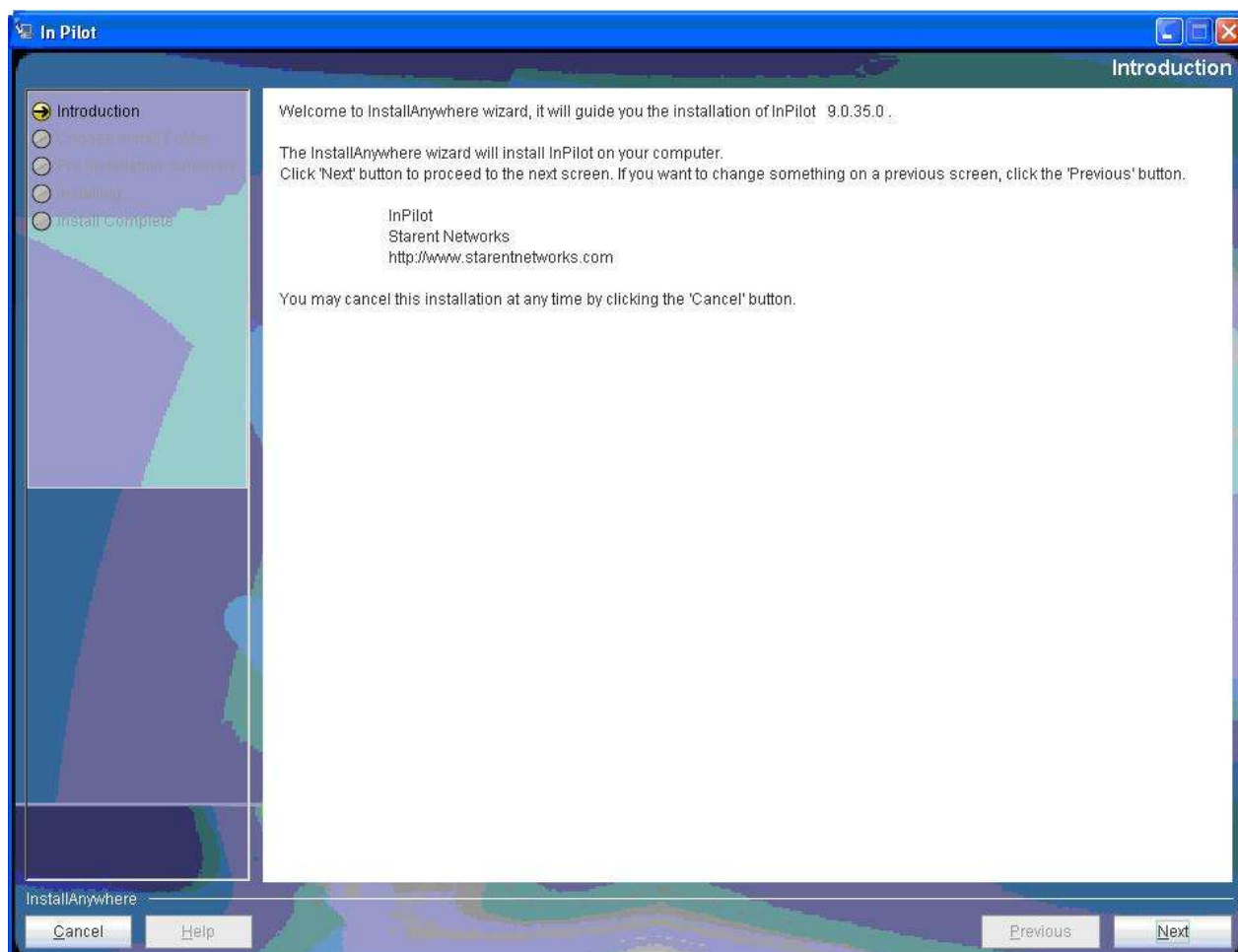
where [MODE] is optional.

Two installation modes are supported namely:

- gui
- console

The command '*inst/uninst -help*' provides usage of the scripts. This script installs the Apache, Postgres and Scheduling servers functionality. The display must be set for running in GUI mode, else the installation will run in Console mode.

The following inPilot Installer dialog appears displaying the inPilot version getting installed.



**Step 5** Click **Next** to proceed.

**Step 6** Respond to the on-screen prompts with the help of inputs given in the following table and configure various parameters as required.

| Parameter                             | Description                                                                                                                                                                                                                                                                                                              | Default Value       |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| PostgreSQL System Settings screen     |                                                                                                                                                                                                                                                                                                                          |                     |
|                                       | This dialog asks the user to check the variable values in <i>/etc/system</i> file. If one or more entries are missing, click <b>Cancel</b> to update <i>/etc/system</i> and restart the system to re-run installer. For more information, refer to the <a href="#">Setting the Database Environment Strings</a> section. | N/A                 |
| inPilot Installation Directory screen |                                                                                                                                                                                                                                                                                                                          |                     |
| Enter inPilot Directory Path          | Enter the base directory path where inPilot is to be installed. Click <b>Browse</b> to change the installation path.                                                                                                                                                                                                     | <current_directory> |

| Parameter                                                                                                                                                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Default Value |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| A Component Type screen appears showing the components for installation. This screen allows you to select either inPilot or RDP for installation. Select any of the components that you want to install. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |
| inPilot Administrator and Group Configuration screen                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |
| Administrator Login                                                                                                                                                                                      | <p>Enter an administrator name for the Operating System (OS) level administrator of inPilot.</p> <hr/>  <b>IMPORTANT:</b> The Administrator user created should be manually activated with a password once the inPilot installation is complete. This can be done by entering the following command as <b>root</b> user: <b>passwd &lt;adminusername&gt;</b> Upon executing this command, the user will be asked to enter a suitable administrator password. | muradmin      |
| Administrator User ID                                                                                                                                                                                    | <p>Type the Administrator User ID for the inPilot Administrator login.</p> <hr/>  <b>IMPORTANT:</b> This input will be asked only if the Administrator login name provided does not exist.                                                                                                                                                                                                                                                                   | 100014        |
| Administrator Primary Group                                                                                                                                                                              | <p>Type the Primary Group name for the Administrator.</p> <hr/>  <b>IMPORTANT:</b> If the Administrator login name provided already exists, the Primary Group of this login will be considered as the <b>inPilot User Group</b> . Otherwise, the user will be asked to enter the Primary Group information.                                                                                                                                                | inPilot       |
| PostgreSQL Server Configuration screen                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |
| Postgres Login                                                                                                                                                                                           | This is a read-only parameter. The Postgres login name will be the same as the Administrator login name provided earlier.                                                                                                                                                                                                                                                                                                                                                                                                                     | N/A           |
| Postgres password                                                                                                                                                                                        | Enter the password for the Postgres database administration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | N/A           |

| Parameter                                                                                                                                                                                                                                                           | Description                                                                                                                                                                                                                                                                                                                                             | Default Value                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Postgres Port                                                                                                                                                                                                                                                       | <p>Enter the port number on which PostgreSQL communication will be running.</p> <hr/>  <b>IMPORTANT:</b> Ensure that no other Postgres server is running on configured port.                                                                                           | 5432                                       |
| Enter data directory path                                                                                                                                                                                                                                           | <p>Enter the data directory path of postgres being used. Click <b>Browse</b> to change the installation path.</p>                                                                                                                                                                                                                                       | <inpilot_install_dir>/starbi/postgres/data |
| inPilot Port Configuration screen                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                         |                                            |
| Apache Port                                                                                                                                                                                                                                                         | <p>Type the port number over which Apache web server communication will occur with inPilot.</p> <hr/>  <b>IMPORTANT:</b> Ensure that no other Apache web server is running on the port being used for installation. If the port is being used, abort the installation. | 8080                                       |
| RPC Port                                                                                                                                                                                                                                                            | <p>Type the port number over which XML-RPC server communication will occur with inPilot.</p> <hr/>  <b>IMPORTANT:</b> Ensure that no other XML-RPC server is running on the configured port.                                                                         | 9999                                       |
| inPilot Archive Directory Configuration screen                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                         |                                            |
| Enter archive directory path                                                                                                                                                                                                                                        | <p>Enter the directory path for archiving parsed files. Click <b>Browse</b> to change the installation path.</p>                                                                                                                                                                                                                                        | <inpilot_install_dir>/archive              |
| inPilot Bulkstats Configuration screen                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                         |                                            |
| Bulkstat File Transfer Interval [secs]                                                                                                                                                                                                                              | Enter the file transfer interval for bulk statistics in seconds.                                                                                                                                                                                                                                                                                        | 900                                        |
| Bulkstat Sample Interval [secs]                                                                                                                                                                                                                                     | Enter the sample interval for bulk statistics in seconds.                                                                                                                                                                                                                                                                                               | 300                                        |
| Pre-installation Summary screen                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                         |                                            |
| <p>The pre-installation screen displays the product name, install location, other product configurations, and disk space information before installing the product.</p> <p>Click <b>Cancel</b> to stop installation or <b>Install</b> to continue installation.</p> |                                                                                                                                                                                                                                                                                                                                                         |                                            |
| Installing inPilot screen                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         |                                            |

| Parameter                                                                                                                       | Description                                                                                                | Default Value |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------|
| The screen shows all the contents being loaded on the machine during installation.<br>Click <b>Cancel</b> to stop installation. |                                                                                                            |               |
| inPilot Server Startup screen                                                                                                   |                                                                                                            |               |
| Start All Servers After Installation                                                                                            | Select the option to start all servers after installation.<br>Click <b>Next</b> to proceed.                | N/A           |
| Install Complete screen                                                                                                         |                                                                                                            |               |
|                                                                                                                                 | The screen shows whether installation is successful or failed.<br>Click <b>Done</b> to quit the installer. | N/A           |

## Confirming Successful Installation

Verify that the inPilot application is running and accessible by entering the following URL in your Web browser:

`http://<inpilot_installation_server_name_or_IP_address>:<apache_port>`

For information on using the inPilot GUI, see the *inPilot Online Help* documentation.

# Upgrading inPilot

This section provides instructions on how to upgrade the installed inPilot application.

---

 **IMPORTANT:** To perform the upgrade procedure explained in this section, you must be logged into the server as a **root** user.

---

The upgrade procedure ensures that the database content is retained in the new installation. It also ensures that if there are any pending files to be processed in the old installation, then those file are also made available in the new installation.

---

 **IMPORTANT:** Before performing the upgrade process, ensure that the browser cache is cleared.

 **CAUTION:** Please contact your local support representative to ensure compatibility prior to upgrading.

---

 **IMPORTANT:** If the previous installation is inPilot then the installation script will cause upgrading the software to inPilot and if the previously installed component is RDP then the script will cause upgrading to RDP.

---

The inPilot upgrade process is carried out in two steps:

1. Online Upgrade
2. Offline Upgrade

The online upgrade is the conventional upgrade process. It will upgrade only last 7 days of available data i.e. it will get the latest date for which data is available and upgrade the last 7 days data only from that date.

Once the online upgrade is complete, offline upgrade starts in the background and it will upgrade all the remaining data older than last 7 days.

During the offline upgrade, there is a possibility of data outage. So, the reports older than last 7 days might be inaccessible from GUI during this period. Once the offline upgrade is over, these reports will be visible again.

The following steps describe how to upgrade the inPilot application:

**Step 1** Stop the EDR file generation through L-ESS or HDD push. Run the following commands:

```
ls -lrt <install path>/starbi/data/temp_data_files/<chassis
name>/edr/normalized_data/data

ls -lrt <install path>/starbi/data/temp_data_files/<chassis
name>/edr/normalized_http_data/data
```

Check if the above commands return any pending input EDR files for the available gateways. If yes, wait for some time (5-10 minutes) to let the inPilot process finish these pending EDR files. Check again, and repeat the procedure until there are no pending EDR files for the available gateways. This is to make sure that you do not stop any inPilot process while processing.

**Step 2** Stop the inPilot application using the following command from the *<inpilot\_install\_dir>/starbi/bin* directory:

```
./serv stop
```



**IMPORTANT:** For all inPilot software versions 9.0.16 and later, use the **serv stop** command.

or

```
./shutdown.sh
```



**IMPORTANT:** For all inPilot software versions 9.0.15 and lower, use the **shutdown** command.

Then, check the status of processes using the following command:

```
./serv status
```



**IMPORTANT:** For all inPilot software versions 9.0.16 and later, use the **serv status** command.

or

```
./status.sh
```



**IMPORTANT:** For all inPilot software versions 9.0.15 and lower, use the **status** command.



**IMPORTANT:** Make sure that none of the processes is running.

**Step 3** Obtain the list of dynamic tables for taking their backup using the following command:

```
./psql -U <postgres username> -p <portnumber> -c "select tablename from pg_tables where tablename like '%2009'" starbidb
```

The following is a sample output:

```
tablename
```

```

```

```
sbi_edr_gw_proto_summary_06292009
```

```
sbi_edr_sub_06292009
```

```
sbi_edr_sub_topn_06292009
```

```
sbi_edr_gw_proto_summary_06302009
```

```
sbi_edr_sub_06302009
```

```
sbi_edr_sub_topn_06302009
```

**Step 4** Take backup of each of these tables using the following command:

```
./pg_dump -p <postgres port> -U <postgres user> -F p -v -f "<file name with absolute path>" -t "\"public\".\"<table_name>\"" starbidb
```



**IMPORTANT:** Be sure that there are different file names for different tables. It is recommended to have the file name same as the table name to avoid any confusion, and keep this file in the `/export/home/` directory.

For example, assuming that you are in the `postgres/bin` directory:

```
./pg_dump -p 5432 -U sbgres -F p -v -f
"/export/home/sbi_edr_gw_proto_summary_06292009.sql" -t
 "\"public\".\"sbi_edr_gw_proto_summary_06292009\" \" starbidb
```

**Step 5** Take backup of schedules and gateway tables for triggering parsing of files.

```
./psql -U <postgres user> -p <postgres port> -c "copy sbi_gateway to
'<old_inpilot_install_dir>/starbi/postgres/data/sbi_gateway" starbidb
```

**Step 6** Stop the postgres server by entering the following command from the `<inpilot_install_dir>/postgres/bin` directory:

```
./pg_stop
```

**Step 7** Install the new release of inPilot.

inPilot is upgradable from:

- Earlier script installer based version to newer script installer based version
- Earlier script installer based version to GUI/Console installer based version
- Earlier GUI/Console installer based version to subsequent GUI/Console installer based version

For instructions on different inPilot installers, refer to the [inPilot Installation](#) section.

In case of the first two upgrade options mentioned above, make sure that you enter the old installation path (`<install_dir>`) for upgrade when prompted for the 'inPilot Installation directory'. In case of the third upgrade option, it automatically detects the old installation path through registry information. The installation automatically detects earlier setup and reads required configuration for Apache, Postgres and RPC port, etc. You will be prompted with a confirmation message before proceeding with the upgrade process.

After upgrade, the log files are generated at `/starbi/logs/` directory.



**IMPORTANT:** The installation script will check if the Administrator user and Primary Group information is already present in database. If it does not exist, it will ask the user to enter this information and then continue with the upgrade.

**Step 8** After the installation is done, start all the inPilot related processes.

**Step 9** Restore the backed up data from postgres server by entering the following command from the `<inpilot_install_dir>/starbi/postgres/bin` directory:

```
./psql -U <postgres user> -p <postgres port> starbidb < <backedup table file
name>
```

For example:

```
./psql -U sbgres -p 5432 starbidb <
/export/home/sbi_edr_gw_proto_summary_06292009.sql
```

This creates required table and loads the data. Then, restore the gateway tables and schedules.

**Step 10** Modify the L-ESS configuration or HDD configuration to reflect the changes in the inPilot installation path.

**Step 11** Restart the EDR file generation or HDD file push as needed.



**IMPORTANT:** The RDP should be upgraded manually. If the version of the RDP is not compatible with the inPilot, then inPilot may ignore the data sent by RDP. Thus, RDP should always be upgraded if it is not in sync with the inPilot. For change in mode from RDP to inPilot or vice-versa, re-installation is required.

## Uninstalling inPilot

This section provides instructions on how to uninstall the inPilot application.

---

 **IMPORTANT:** It is recommended that you manually perform a backup of all critical and historical data files before proceeding with this procedure. Failure to do this causes removal of all the directories, files and database.

---

The inPilot application and its components can be uninstalled using one of the following two methods:

- [Uninstallation Using Script-based Uninstaller](#)
- [Uninstallation Using GUIConsole-based Uninstaller](#)

---

 **IMPORTANT:** The Administrator user and Primary Group configured during installation / upgrade will not be deleted during uninstallation. These have to be deleted manually by entering the following commands as **root** user: `userdel <ADMINUSER>` and `groupdel <ADMINGROUP>`

---

## Uninstallation Using Script-based Uninstaller

---

 **IMPORTANT:** To perform the uninstallation procedure explained in this section, you must be logged into the server as a **root** user.

---

This method must be used if installation has been done using `install_starbi` script.

Execute the script by entering the following command:

```
./uninstall_starbi
```

## Uninstallation Using GUI/Console-based Uninstaller

---

 **IMPORTANT:** To perform the uninstallation procedure explained in this section, you must be logged into the server as a **root** user.

---

This method must be used if installation has been done using GUI/Console based installer (using `inst`).

Change to the directory where inPilot is installed and execute the script by entering the following command:

```
./uninst [MODE]
```

where [MODE] is optional.

Two modes are supported namely:

- gui
- console

This uninstall script stops all the servers if it is running and all the data is wiped off.



**IMPORTANT:** The uninstall script does not cleanup the archive directory.

---

# Chapter 4

## inPilot Administration and Management

---

This chapter provides information on administering and managing the inPilot application.

This chapter describes the following topics:

- [Launching the inPilot GUI](#)
- [Administration](#)
- [Operations and Management](#)
- [Troubleshooting inPilot](#)

# Launching the inPilot GUI

To launch the inPilot interface:

1. In a Web browser, enter the following URL:

`http://<inPilot-server-hostname or IP address>:<apache port>`

For example, `http://10.4.5.2:8080`

2. Enter your user name and password. The user name must be an alpha and/or numeric string of 3 through 16 characters in length. The only special character that a user name can include is underscore (\_).

The password must meet the following criteria:

- Must be a minimum of 8 characters long and a maximum of 32 characters long
- Must not be a repeat or reverse of the associated user name
- Must not be more than 3 of the same characters used consecutively
- Must contain at least 3 of the following combinations:
  - English upper case characters (A through Z)
  - English lower case characters (a through z)
  - Numerical (0 through 9)
  - Special characters (such as \_, ., !, @, \$, \*, =, -, ?, etc)

It is recommended to use the following browsers:

- Internet Explorer (v 7.0+)
- Mozilla Firefox (v 3.0.10+)

Note that:

- No additional plug-in is required.
- The javascript is enabled by default on the intended browser.
- Suggested screen resolution is 1024 x 768 and above.

# Administration

This section provides information on how to administer and manage the inPilot application.

## Managing User Accounts

The inPilot application provides two levels of access privileges:

- Administrator: Users in this group have the following privileges:
  - Create, edit, and delete other user accounts
  - Edit configuration settings
  - Activate, deactivate, and reset password for operator users
  - Generate and view reports
- Operator: Users in this group can:
  - Generate reports
  - View module-level reports available to them



**IMPORTANT:** Only administrator with *admin* name can create user accounts.

## Managing Gateways

The inPilot application supports configuring multiple gateways for which reports can be customized and generated. Gateways are the chassis from which EDR and bulkstat files are fetched to the reporting server.



**IMPORTANT:** Users with administrative privilege can only add and manage gateways.

When a gateway is added through the GUI, a directory by the name of the gateway is created in the `<in pilot _install _dir>/starbi/server/data` directory.

The gateway directory structure looks like the following:

`<data directory>`

|

|--> <Gateway name>

|

|--> edr

The inPilot application expects the EDR files in the directories that are created when adding the gateway.

## Configuring Logging

The inPilot application facilitates logging to trace and debug problems identified within the reporting system.



**IMPORTANT:** Users with administrative privilege can only manage logging.

---

# Operations and Management

This section provides information on the scripts that can be used to manage the inPilot components and the reports.

## Using the Maintenance Utility

A shell script utility called *serv* is included with inPilot in the `<inpilot_install_dir>/starbi/bin` directory.

This *serv* script can be used to manage the following inPilot processes:

- Process Monitor (PSMON) Application
- Scheduling Server
- Postgres Server
- Apache Server

This utility can report the status of the inPilot processes on the system or it can be used to stop the inPilot process.

Following are the options available with the *serv* script:

```
./serv { psmonitor | scheduler | postgres | apache } [start | stop | status]
```

| Keyword   | Description                                                                                          |
|-----------|------------------------------------------------------------------------------------------------------|
| psmonitor | This is an optional keyword used with the <i>serv</i> script. This represents the PSMON application. |
| scheduler | This is an optional keyword representing the scheduling server.                                      |
| postgres  | This is an optional keyword representing the postgres server.                                        |
| apache    | This is an optional keyword representing the apache server.                                          |
| start     | Starts each inPilot process.                                                                         |
| stop      | Kills or stops the running inPilot process.                                                          |
| status    | Displays the status of each inPilot process.                                                         |

For example, if you want to start only the PSMON, then enter the following command:

```
./serv start psmonitor
```

or

```
./serv psmonitor start
```



**IMPORTANT:** If you stop the inPilot process, make sure that PSMON is not running. Otherwise PSMON will restart the inPilot application.

The following is a sample output of the **serv status** command:

```

----- inPilot Process Status -----
PID Process Status

4245 Process Monitor Running
4256 Scheduling server Running
4267 Postgres Server Running
4289 Apache Server Running

```

## Using the PSMON Script

PSMON is a perl script that is used to monitor the Scheduling Server, Postgres Server, and Apache Server processes. This script can start or stop the processes based on certain thresholds specified in the inPilot configuration file. The PSMON respawns any dead processes using the set of rules defined in the configuration file.

This script can also optionally send notifications to users via e-mail.

## Generating Reports in Excel Format

To generate the reports in excel format, execute the following script from the `<inpilot_install_dir>/starbi/bin` directory.

```
./get_excel_report.sh -day <date for report generation> -f<path where report to be stored> -filter<filter for the report>
```

The script takes three parameters, the date for which report is to be generated, the path where generated report is to be stored, and the filter for the reports. The date must be in mm-dd-yyyy format only, and the filter can be based on Type Allocation Code (TAC) or Access Point Name (APN).

## Using the unanonymize\_msisdn.sh Script

inPilot currently supports reporting of subscriber's private data like Mobile Station Integrated Network (MSISDN) both in GUI and excel format. This particular subscriber data is visible only to users with administrator privilege. By default, the excel report will be presenting MSISDNs in an encrypted format in all subscribers based reports.

A separate shell script utility, `unanonymize_msisdn.sh`, is available to decrypt the MSISDNs. This utility will check for user's privilege before decrypting the MSISDNs list. It will prompt for the GUI administrator password.

To decrypt the MSISDNs, execute the following script from the `<inpilot_install_dir>/starbi/bin` directory:

```
./unanonymize_msisdn.sh -u <username> -f <file containing list of encrypted MSISDNs> -o <output file path>
```



**IMPORTANT:** Please note that the users require GUI administrator credentials to access this utility.

## Using the generate\_dns\_mapp\_sql.sh Script

To generate the DNS mapping for the specified list of IP addresses, execute the following script from the `<inpilot_install_dir>/starbi/bin` directory:

```
./generate_dns_mapp_sql.sh <input file for IP> <output file where mapping should be stored>
```

| Keyword/Variable                           | Description                                                                    |
|--------------------------------------------|--------------------------------------------------------------------------------|
| input file for IP                          | A file containing IP addresses. Each IP address must be present in a new line. |
| output file where mapping should be stored | An output file for storing the DNS mappings in SQL format.                     |

This script is used to perform Internet DNS lookup of the specified IP addresses. It uses the 'nslookup' system administration command to find the DNS name of the specified IP. Please note that the machine must be connected to Internet for successful execution.

## Using the getSupportDetails Script

In the event additional troubleshooting assistance is required, debugging information can be collected using a script called *getSupportDetails.pl*. This script collects different log files and captures the output of certain system commands that aid in troubleshooting issues. This script is packaged with inPilot in the `<inpilot_install_dir>/starbi/tools/supportdetails/` directory.

This script refers to an XML file to get the list of logs. This XML file resides in the same directory as the script. Once executed, the script retrieves the contents of logs, files, folders, and output of certain commands and prepares a zipped file (*inpilotsupportDetails.tar.gz*), by default it is placed in `/tmp/log` directory.

## Requirements

Perl 5.8.5 and above is required for running the script.

Apart from standard Perl modules (which are included in default installation of Perl), some additional modules are required for running the script. The list is as follows:

- expat version 1.95.8

- XML::Parser version 2.34
- XML-Parser-EasyTree
- Devel-CoreStack version 1.3

These modules are installed by default by the product. Please ensure that the above mentioned modules are installed when using a different installation of Perl.

To run the script, change to the directory path where the script is present and type:

```
./getSupportDetails.pl [--level=...] [--xmlfile=...] [--help]
```

| Keyword/Variable | Description                                                                                                                                                                                    |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| --level          | Specifies the level of debug to run. It can have a maximum of 4 levels. The level 4 provides the most detailed information.<br>Default: 1                                                      |
| --xmlfile        | Specifies the xml file name to be used for collecting the log.<br>Default: getSupportDetails.xml                                                                                               |
| --onlyrecentlogs | Collects only recent logs and skips detailed logs.<br>Default: Collects detailed logs                                                                                                          |
| --collectFor     | Collects problem specific logs and information which is not collected under normal levels. This can be combined with --level option.<br>Default: Collects logs covered under '--level' option. |
| --help           | Displays the supported keywords/variables.                                                                                                                                                     |

For example, **./getSupportDetails.pl --level=4 --xmlfile=/tmp/getSupportDetails.xml**

## Supported Levels

The logs that can be collected for different levels are as follows:

- Level 1:
  - Recent Log files
  - Current status (running / not running) of the product
  - Current Config files of the product
- Level 2:
  - Logs from Level 1
  - Installation Logs
  - Database Logs (if available)
  - Web Server logs (if available)
  - Information of Solaris version and current patch installed
  - Output of the following commands:

```
netstat -an
```

```
ifconfig -a
```

```
df -k
etc..
```

- Level 3:
  - Logs from level 2
  - Syslog Configuration and log files
- Level 4:
  - Logs from level 3
  - All Log files (including old logs)
  - Crontab entries
  - Information of packages installed
  - Stack trace of any crash files (if debugger is installed on local machine)
  - System Libraries only if any core file present in crash directory
  - Level of Solaris installed
  - Output of the following commands:

```
ipcs
ps -eaf
etc..
```

## Server script parameters

The number of files being processed during each parsing interval for HTTP and non-HTTP EDRs can be controlled using the following parameters defined in *settings.py* file.

```
EDR_TOTAL_NO_OF_FILES = 25
```

```
EDR_MAX_NO_OF_PROCESSES = 5
```

```
HTTP_TOTAL_NO_OF_FILES = 25
```

```
HTTP_MAX_NO_OF_PROCESSES = 5
```

With the above default configuration, if the number of files being accumulated are less than 25 and not in multiples of 5, then inPilot spawns one more process to parse the remaining files.

# Troubleshooting inPilot

This section provides information on how to resolve situations you might encounter with using inPilot software. This section provides problem definitions, their likely cause(s), and solutions.

|                    |                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem:           | The EDR files are generated and moved out from the input directory. However, there are no reports getting generated.                                                                                                                                                                                                                                                   |
| Possible Cause(s): | <ul style="list-style-type: none"> <li>The files may not be available in the archive directory i.e. <code>&lt;inpilot_install_dir&gt;/starbi/archive</code>.</li> </ul>                                                                                                                                                                                                |
| Action(s):         | <ul style="list-style-type: none"> <li>Check if the files are available in the archive directory.</li> <li>Check if they are marked invalid. If yes, check if there are any headers present in the files. If not, you need to configure ECS appropriately.</li> <li>If the headers are present, check if all the required headers are present in the files.</li> </ul> |

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem:           | inPilot reporting client cannot be started.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Possible Cause(s): | The web browser cache might be full.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Action(s):         | <p>The browser cache must be cleared.</p> <p>In the case of Firefox, follow these steps:</p> <ul style="list-style-type: none"> <li>On the <b>Tools</b> menu, click <b>Clear Private Data</b>.</li> <li>Select <b>Cache</b> check box.</li> <li>Click <b>Clear Private Data Now</b>.</li> </ul> <p>In the case of Internet Explorer, follow these steps:</p> <ul style="list-style-type: none"> <li>On the <b>Tools</b> menu, click <b>Internet Options</b>.</li> <li>Click <b>Delete</b>.</li> <li>Select <b>Temporary Internet files</b> check box.</li> <li>Click <b>Delete</b>.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  <b>IMPORTANT:</b> The Firefox version supported for inPilot is 3.0.10 and later. For Internet Explorer, it is 7.0 and later. </div> |

|                    |                                                 |
|--------------------|-------------------------------------------------|
| Problem:           | The bulkstats or KPI reports are not generated. |
| Possible Cause(s): | The bulkstats file might not be parsed.         |

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action(s): | <ul style="list-style-type: none"> <li>On the <b>ADMIN</b> menu, check the bulkstats audit under <b>AUDIT</b>. The audit should indicate whether the bulkstats files are being parsed or not. For more information, refer to the <i>inPilot Online Help</i>.</li> <li>Check if FTP is enabled on the inPilot server.</li> <li>Check if the bulkstats are FTPed to correct location on the inPilot server from the gateway. The path should be as follows:<br/> <b>\$STARBI_HOME/server/data/\$gwname/bs</b><br/>           Where \$STARBI_HOME = inPilot installation directory, \$gwname = Gateway name</li> <li>Check if the naming convention of the bulkstat files matches with the following convention:<br/> <i>bulkstat%date%%time%.txt</i><br/>           Where, date format = yyyymmdd and Time format = hhmmss<br/>           Example: bulkstat20100206150002.txt</li> <li>Check if the Bulkstats/KPIs UI show only one day data</li> <li>Check if the counters of same schemas are added in the formula while configuring KPIs. For example, if you are adding KPI in SGSN schema, then you should add counters of SGSN only in the formula.</li> <li>Check if the bulkstat files are always pushed from gateway to master inPilot and not to RDP.</li> </ul> <hr/> <p> <b>IMPORTANT:</b> If you do not have Web Element Manager (WEM) application installed, then you should refer to the configuration file in <i>Sample Bulkstats Schema Configuration</i> appendix of the <i>inPilot Installation and Administration Guide</i>.</p> <hr/> <p> <b>IMPORTANT:</b> inPilot is compatible with WEM 9.x. Therefore, you should use WEM 9.x to configure bulkstats on gateways.</p> <hr/> |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem:           | Parser is not handling data files properly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Possible Cause(s): | The file might be corrupted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Action(s):         | <ul style="list-style-type: none"> <li>File are marked as 'UNPROCESSED.&lt;file&gt;' and moved to archive directory if one of the following conditions are met:               <ul style="list-style-type: none"> <li>file is '.gz' and corrupted with CRC error.</li> <li>file is empty.</li> <li>file does not have a header.</li> </ul> </li> <li>File are marked as 'CORRUPTED.&lt;file&gt;' and moved to archive directory if the file is '.gz' and corrupted (other than CRC error) like 'invalid compressed data--format violated'</li> </ul> |

|          |                                         |
|----------|-----------------------------------------|
| Problem: | Unable to add / edit / delete gateways. |
|----------|-----------------------------------------|

|                    |                                                                                                                                                                                                                                                 |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Possible Cause(s): | The gateway configuration may be incorrect.                                                                                                                                                                                                     |
| Action(s):         | <ul style="list-style-type: none"> <li>• Check if correct IP is provided while adding the gateway.</li> <li>• Check if gateway host is reachable from inPilot.</li> </ul> <p>For more information, refer to the <i>inPilot Online Help</i>.</p> |

|                    |                                                                                                                                                                                                                                                                                                              |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem:           | Unable to add / edit / delete RDPs.                                                                                                                                                                                                                                                                          |
| Possible Cause(s): | The RDP configuration may be incorrect.                                                                                                                                                                                                                                                                      |
| Action(s):         | <ul style="list-style-type: none"> <li>• Check if correct IP and port are provided while adding RDP.</li> <li>• Check if RDP is actually running on remote machine.</li> <li>• Check if RDP host is reachable from inPilot.</li> </ul> <p>For more information, refer to the <i>inPilot Online Help</i>.</p> |

|                    |                                                                                                                                                                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem:           | No reports are generated from RDP.                                                                                                                                                                                                                   |
| Possible Cause(s): | The RDP configuration may be incorrect.                                                                                                                                                                                                              |
| Action(s):         | <ul style="list-style-type: none"> <li>• Check if RDP is actually running on remote machine.</li> <li>• Check if the user name and password configured are correct.</li> </ul> <p>For more information, refer to the <i>inPilot Online Help</i>.</p> |

|                    |                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem:           | Duplicate reports are generated and/or the reports are incorrect.                                                                                                                                                                                                                                                                                                                                        |
| Possible Cause(s): | inPilot might have parsed half-cooked files.                                                                                                                                                                                                                                                                                                                                                             |
| Action(s):         | <p>The chassis tags the EDR files with a prefix 'prog.' while transferring to inPilot. After the transfer is complete, the chassis removes the 'prog.' tag. The 'prog.' prefix indicates that the file is half cooked.</p> <ul style="list-style-type: none"> <li>• Check if the EDR files with the prefix 'prog.' are ignored.</li> <li>• Check if EDR file formats are configured properly.</li> </ul> |

# Chapter 5

## Sample Bulkstats Schema Configuration

---

The following is a sample bulkstats schema configuration for inPilot:

```
configure

 bulkstats collection

 bulkstats mode

 sample-interval 1

 transfer-interval 5

 file 1

 header format "Format 9.0.0.2"

 remotefile format
$STARBI_HOME/server/data/$gwname/bs/bulkstat%date%%time%.txt

 receiver 10.4.70.233 primary mechanism ftp login guest password
guest12

 card schema cardSch1 format
EMS, Card, %date%, %time%, %card%, %cpubusy%, %cpuidle%, %numproc%, %memused%, %memtotal%
, %numcpu%, %cpu0-cpubusy%, %cpu0-cpuidle%, %cpu0-numproc%, %cpu0-memused%, %cpu0-
memtotal%, %cpu0-cpuused-user%, %cpu0-cpuused-sys%, %cpu0-cpuused-io%, %cpu0-
cpuused-irq%, %cpu0-cpuused-idle%, %cpu1-cpubusy%, %cpu1-cpuidle%, %cpu1-
numproc%, %cpu1-memused%, %cpu1-memtotal%, %cpu1-cpuused-user%, %cpu1-cpuused-
sys%, %cpu1-cpuused-io%, %cpu1-cpuused-irq%, %cpu1-cpuused-idle%, %cpu2-
cpubusy%, %cpu2-cpuidle%, %cpu2-numproc%, %cpu2-memused%, %cpu2-memtotal%, %cpu2-
cpuused-user%, %cpu2-cpuused-sys%, %cpu2-cpuused-io%, %cpu2-cpuused-irq%, %cpu2-
cpuused-idle%, %cpu3-cpubusy%, %cpu3-cpuidle%, %cpu3-numproc%, %cpu3-memused%, %cpu3-
memtotal%, %cpu3-cpuused-user%, %cpu3-cpuused-sys%, %cpu3-cpuused-io%, %cpu3-
cpuused-irq%, %cpu3-cpuused-idle%, %15avg-cpubusy%, %15peak-cpubusy%, %5avg-
cpubusy%, %5peak-cpubusy%, %1avg-cpubusy%, %15avg-memused%, %15peak-memused%, %5avg-
memused%, %5peak-memused%, %1avg-memused%, %cpu0-15avg-cpubusy%, %cpu0-15peak-
cpubusy%, %cpu0-5avg-cpubusy%, %cpu0-5peak-cpubusy%, %cpu0-1avg-cpubusy%, %cpu0-
15avg-memused%, %cpu0-15peak-memused%, %cpu0-5avg-memused%, %cpu0-5peak-
memused%, %cpu0-1avg-memused%, %cpu1-15avg-cpubusy%, %cpu1-15peak-cpubusy%, %cpu1-
5avg-cpubusy%, %cpu1-5peak-cpubusy%, %cpu1-1avg-cpubusy%, %cpu1-15avg-
memused%, %cpu1-15peak-memused%, %cpu1-5avg-memused%, %cpu1-5peak-memused%, %cpu1-
1avg-memused%, %cpu2-15avg-cpubusy%, %cpu2-15peak-cpubusy%, %cpu2-5avg-
cpubusy%, %cpu2-5peak-cpubusy%, %cpu2-1avg-cpubusy%, %cpu2-15avg-memused%, %cpu2-
15peak-memused%, %cpu2-5avg-memused%, %cpu2-5peak-memused%, %cpu2-1avg-
memused%, %cpu3-15avg-cpubusy%, %cpu3-15peak-cpubusy%, %cpu3-5avg-cpubusy%, %cpu3-
```

```
5peak-cpubusy%, %cpu3-1avg-cpubusy%, %cpu3-15avg-memused%, %cpu3-15peak-
memused%, %cpu3-5avg-memused%, %cpu3-5peak-memused%, %cpu3-1avg-memused%, %task-
sessmgr-num%
```

```
card schema cardSch2 format EMS, Card2, %date%, %time%, %card%, %task-
sessmgr-avgcpu%, %task-sessmgr-avgmem%, %task-sessmgr-maxcpu%, %task-sessmgr-
maxmem%, %task-allmgr-num%, %task-allmgr-maxcpu%, %task-allmgr-maxmem%, %task-
l2tpmgr-num%, %task-l2tpmgr-maxcpu%, %task-l2tpmgr-maxmem%, %task-famgr-num%, %task-
famgr-maxcpu%, %task-famgr-maxmem%, %task-hamgr-num%, %task-hamgr-maxcpu%, %task-
hamgr-maxmem%, %task-acsmgr-num%, %task-acsmgr-avgcpu%, %task-acsmgr-avgmem%, %task-
acsmgr-maxcpu%, %task-acsmgr-maxmem%, %task-vpnmgr-num%, %task-vpnmgr-
maxcpu%, %task-vpnmgr-maxmem%
```

```
port schema portSch1 format
EMS, Port, %date%, %time%, %card%, %port%, %rxbytes%, %txbytes%, %ucast_inpackets%, %ucas
t_outpackets%, %mcast_inpackets%, %mcast_outpackets%, %bcast_inpackets%, %bcast_outp
ackets%, %rxpackets%, %txpackets%, %rxdiscbytes%, %rxdiscpackets%, %txdiscbytes%, %txd
iscpackets%, %maxrate%, %frag-rcvd%, %pkt-reassembled%, %frag-tokenel%, %util-rx-
curr%, %util-tx-curr%, %util-rx-5min%, %util-tx-5min%, %util-rx-15min%, %util-tx-
15min%, %port-5peak-rx-util%, %port-5peak-tx-util%, %port-15peak-rx-util%, %port-
15peak-tx-util%
```

```
schema systemSch1 format EMS, PDSNSystem, %date%, %time%, %sess-
ttlarrived%, %sess-ttlrejected%, %sess-ttlconnected%, %sess-ttlauthsucc%, %sess-
ttlauthfail%, %sess-ttllcpup%, %sess-ttllpcup%, %sess-ttlsrcviol%, %sess-
ttlkeepfail%, %sess-curttlcalls%, %sess-cursipconn%, %sess-curmipconn%, %sess-
curactcall%, %sess-curdormcall%, %sess-curarrived%, %sess-curlicpnegot%, %sess-
curlicpup%, %sess-curauth%, %sess-curauthed%, %sess-curipcpup%, %sess-curdisc%, %all-
ttlarrived%, %all-ttlrejected%, %all-ttlldemult%, %all-ttlldereg%, %all-
curactive%, %fa-ttlarrived%, %fa-ttlrejected%, %fa-ttlldemult%, %fa-ttlldereg%, %fa-
curactive%, %ha-ttlarrived%, %ha-ttlrejected%, %ha-ttlldemult%, %ha-ttlldereg%, %ha-
curactive%, %sess-calldur-1min%, %sess-calldur-2min%, %sess-calldur-5min%, %sess-
calldur-15min%, %sess-calldur-1hour%, %sess-calldur-4hour%, %sess-calldur-
12hour%, %sess-calldur-24hour%, %sess-calldur-over24hour%, %sess-setuptime-
100ms%, %sess-setuptime-200ms%, %sess-setuptime-300ms%, %sess-setuptime-
400ms%, %sess-setuptime-500ms%, %sess-setuptime-600ms%, %sess-setuptime-
700ms%, %sess-setuptime-800ms%, %sess-setuptime-900ms%, %sess-setuptime-
1sec%, %sess-setuptime-2sec%, %sess-setuptime-3sec%, %sess-setuptime-4sec%, %sess-
setuptime-6sec%, %sess-setuptime-8sec%, %sess-setuptime-10sec%, %sess-setuptime-
12sec%, %sess-setuptime-14sec%, %sess-setuptime-16sec%, %sess-setuptime-
over16sec%, %incremental%, %enddate%, %endtime%, %localenddate%, %localendtime%, %sess-
-ttlfailed%, %uptime%, %uptimestr%, %lic-pdsn%, %lic-ha%, %lic-ggsn%, %lic-
l2tplns%, %sess-txbytes%, %sess-rxbytes%, %sess-txpackets%, %sess-rxpackets%, %sess-
suptxbytes%, %sess-siprxbytes%, %sess-miptxbytes%, %sess-miprxbytes%, %aaa-
ttlreq%, %aaa-curreq%, %aaa-ttlauthreq%, %aaa-curauthreq%, %aaa-ttlauthprobe%, %aaa-
curauthprobe%, %aaa-ttlacctreq%, %aaa-curacctreq%, %aaa-ttlauthsucc%, %aaa-
ttlauthfail%, %aaa-ttlauthpurged%, %aaa-ttlauthcancelled%, %aaa-
ttlauthdmuchal%, %aaa-ttlradauthreq%, %aaa-curradauthreq%, %aaa-
ttlradauthreqretried%, %aaa-ttllclauthreq%, %aaa-curlclauthreq%, %aaa-
ttlpseudoauthreq%, %aaa-curpseudoauthreq%, %aaa-ttlauthnulluser%, %aaa-
ttlacctsucc%, %aaa-ttlacctpurged%, %aaa-ttlacctcancelled%, %aaa-
ttlradacctreq%, %aaa-ttlradacctreqretried%, %disc-reason-summary%, %sess-
curaaaactive%, %sess-curaaaadeleting%, %sess-curaaaacctpending%, %sess-
```

```

ttlemptyfwd%, %sess-ttlemptyrev%, %sess-ttlonlineprepaiderr%, %sess-
ttlprepaidinitautherr%, %sess-ttlcrprpattempt%, %sess-ttlcrprpsuccess%, %sess-
ttlrcprpattempt%, %sess-ttlrcprpsuccess%, %sess-curpmipconn%, %sess-
curl2tplacconn%, %sess-curalwayson%, %sess-curbcmcsauth%, %sess-
curbcmcsconn%, %sess-curhaipseconn%, %sess-curl2tplacconnecting%, %sess-
curpdptypeipconn%, %sess-curpdptypepepppconn%, %sess-curprepaid%, %sess-rxpkt-
1023%, %sess-rxpkt-127%, %sess-rxpkt-16%, %sess-rxpkt-2047%, %sess-rxpkt-255%, %sess-
rxpkt-4095%, %sess-rxpkt-4500%, %sess-rxpkt-511%, %sess-rxpkt-64%, %sess-rxpkt-
over4500%, %sess-ttldisconn%, %sess-ttlhandoff%, %sess-ttlonlineauthfail%, %sess-
ttlonlineauthreq%, %sess-ttlonlineauthsucc%, %sess-ttlprepaid%, %sess-ttlproxydns-
drop%, %sess-ttlproxydns-passthru%, %sess-ttlproxydns-redirect%, %sess-
ttlrenewal%, %sess-txpkt-1023%, %sess-txpkt-127%, %sess-txpkt-16%, %sess-txpkt-
2047%, %sess-txpkt-255%, %sess-txpkt-4095%, %sess-txpkt-4500%, %sess-txpkt-
511%, %sess-txpkt-64%, %sess-txpkt-over4500%, %aaa-ttlauthkeepalive%, %aaa-
curauthkeepalive%, %aaa-ttlacctkeepalive%, %aaa-curacctkeepalive%, %aaa-
ttlauthkeepalivesuccess%, %aaa-ttlauthkeepalivefailure%, %aaa-
ttlauthkeepalivepurged%, %aaa-ttlacctkeepalivesuccess%, %aaa-
ttlacctkeepalivetimeout%, %aaa-ttlacctkeepalivepurged%, %ipsg-total-call-
arrived%, %ipsg-total-call-rejected%, %ipsg-total-call-demult%, %ipsg-total-dereg-
rep-sent%, %ipsg-cur-active-call%, %ipsg-total-active-serv%

```

```

schema systemSch2 format EMS, PDSNSystem2, %date%, %time%, %asngw-
cur-active-call%, %asngw-total-sess-setup%, %asngw-
retriesexhaust%, %asngw.sfs%, %asngw.tidfail%, %asngw-handoffattempt%, %asngw-
handoffdenied%, %asngw-handoffcomp%, %asngw.authsucc%, %asngw-authfailures%, %sess-
ttlcallop%, %sess-curnonanchorconn%, %sess-curdhcppending%, %sess-
ttlinterasngwattempt%, %sess-ttlinterasngwsuccess%, %sess-
ttlinteraasngwattempt%, %sess-ttlinteraasngwsuccess%, %sess-ttlconnected-
1xrtt%, %sess-txbytes-1xrtt%, %sess-rxbytes-1xrtt%, %sess-tpackets-1xrtt%, %sess-
rxpackets-1xrtt%, %sess-ttlconnected-evdorev0%, %sess-txbytes-evdorev0%, %sess-
rxbytes-evdorev0%, %sess-tpackets-evdorev0%, %sess-rxpackets-evdorev0%, %sess-
ttlconnected-evdoreva%, %sess-txbytes-evdoreva%, %sess-rxbytes-evdoreva%, %sess-
tpackets-evdoreva%, %sess-rxpackets-evdoreva%, %flow-ttlestab%, %flow-
ttldisconn%, %flow-curdynamic%, %pdif-cursess%, %pdif-curactive%, %pdif-
curdormant%, %pdif-ttlsetup%, %sess-15peak-curactcall%, %sess-15peak-
curttlcall%, %sess-cursipactive%, %sess-15peak-cursipactive%, %sess-
curmipactive%, %sess-15peak-curmipactive%, %a11-15peak-curactive%, %crp-
curactive%, %crp-15peak-curactive%, %fa-15peak-curactive%, %ha-15peak-
curactive%, %flow-15peak-curdynamic%, %sess-15min-usageactive%, %sess-15min-
usageall%, %cc-cursess%, %cc-ttlecsadd%, %cc-ttlstart%, %cc-ttlsessupd%, %cc-
ttlterm%, %cc-sessfailover%, %cc-msg-recv%, %cc-msg-sent%, %cc-msg-request%, %cc-msg-
answer%, %cc-msg-ccrinit%, %cc-msg-ccainit%, %cc-msg-ccainitaccept%, %cc-msg-
ccainitreject%, %cc-msg-ccainittimeout%, %cc-msg-ccrupdate%, %cc-msg-
ccaupdate%, %cc-msg-ccaupdatetimeout%, %cc-msg-ccrfinal%, %cc-msg-ccafinal%, %cc-
msg-ccafinaltimeout%, %cc-msg-asr%, %cc-msg-asa%, %cc-msg-rar%, %cc-msg-raa%, %cc-
msg-ccadropped%, %cc-msgerr-proto%, %cc-msgerr-badanswer%, %cc-msgerr-
unknownsess%, %cc-msgerr-unknowncomm%, %cc-msgerr-reqtimeout%

```

```

schema systemSch3 format EMS, PDSNSystem3, %date%, %time%, %cc-
msgerr-parse%, %cc-msgerr-unkratinggrp%, %cc-msgerr-unkrulebase%, %cc-msgerr-
unkfailure%, %cc-upd-threshold%, %cc-upd-qht%, %cc-upd-final%, %cc-upd-
quotaexhaust%, %cc-upd-validitytime%, %cc-upd-otherquota%, %cc-upd-

```

```
ratingchange%,%cc-upd-forcedreauth%,%cc-term-diamlogout%,%cc-term-
servnotprov%,%cc-term-badanswer%,%cc-term-admin%,%cc-term-linkbroken%,%cc-term-
authexpired%,%cc-term-usermoved%,%cc-term-sesstimeout%,%cc-traf-catcreate%,%cc-
traf-catdelete%,%cc-traf-catlookup%,%cc-traf-hits%,%cc-traf-misses%,%cc-traf-
triggerevent%,%cc-traf-finalunit%,%cc-traf-catsuccess%,%cc-traf-ratingfail%,%cc-
traf-servdenied%,%cc-traf-limitreached%,%cc-traf-authreject%,%cc-traf-
othererror%,%cf-static-ratereq%,%cf-static-ratesucc%,%cf-static-rateblock%,%cf-
static-ratefail%,%cf-static-ratefail-nr%,%cf-static-ratefail-notindb%,%cf-dyn-
ratereq%,%cf-dyn-ratesucc%,%cf-dyn-rateblock%,%cf-dyn-ratefail%,%cf-
ratereq%,%cf-ratesucc%,%cf-rateblock%,%cf-ratefail%,%ikev2-cursa%,%ikev2-
cursainit%,%ikev2-cursaresp%,%ikev2-ttlsa%,%ikev2-ttlsainit%,%ikev2-
ttlsaresp%,%ikev2-attempt%,%ikev2-attemptinit%,%ikev2-attemptresp%,%ikev2-
rxpacket%,%ikev2-txpacket%,%ikev2-rxoctet%,%ikev2-txoctet%,%ikev2-
initfail%,%ikev2-initfail-noresp%,%ikev2-initfail-resp%,%ikev2-
invcookie%,%ikev2-nattkeepalive-recv%,%ikev2-nattkeepalive-send%,%ikev2-dpd-
recv%,%ikev2-dpd-send%,%ikev2-dpd-recv-reply%,%ikev2-dpd-send-reply%,%ikev2-dpd-
timeout%,%ikev2-dpd-disconnect%,%ikev2-dpd-plrekey%,%lic-combo-phone%,%lic-
ecsv2%,%lic-ipservices-gateway%,%lic-evdoreva-pdsn%,%lic-scm-proxyregistrar-
ietfrfc3261%,%lic-scm-proxypcscf%,%lic-scm-servingscscf%,%lic-scm-
interrogatingicscf%,%lic-asngw%,%lic-asnlr%,%cf-cache-hits%,%cf-cache-
misses%,%cf-cache-has-path-hits%,%cf-cache-flushes%,%sess-curimsauthorized%
```

```
schema systemSch4 format EMS,PDSNSystem4,%date%,%time%,%sess-
curimsauthorizing%,%pdif-curchildsa%,%ikev2-ikesadel%,%ikev2-ikesadelrep-
recv%,%ikev2-ikesadelrep-sent%,%ikev2-ikesadelreq-recv%,%ikev2-ikesadelreq-
sent%,%ipsec-dpd-plrekey%,%url-blacklisting-hits%,%url-blacklisting-
misses%,%ikev2-curikev2sa%,%ikev2-curhalfsa%,%ikev2-curconnsa%,%ikev2-
curestsa%,%ikev2-curchildsa%,%ikev2-exp-retran%,%ikev2-exp-setupnoxchg%,%ikev2-
exp-setup%,%ikev2-exp-lifesoft%,%ikev2-exp-lifehard%,%ikev2-exp-
childsetupnoxchg%,%ikev2-exp-childlifesoft%,%ikev2-exp-childlifehard%,%ikev2-
auth-p1succ%,%ikev2-auth-p1fail%,%ikev2-auth-p1req%,%ikev2-auth-p1rsp%,%ikev2-
auth-p2succ%,%ikev2-auth-p2fail%,%ikev2-auth-p2req%,%ikev2-auth-p2rsp%,%ikev2-
auth-p2succmd5%,%ikev2-auth-p2failmd5%,%ikev2-auth-p2succgtc%,%ikev2-auth-
p2failgtc%,%ikev2-auth-failhash%,%ikev2-auth-failsign%,%ikev2-auth-
failmskmiss%,%ikev2-auth-failmissanother%,%ikev2-xchg-droprrspnoikesa%,%ikev2-
xchg-dropinvrsp%,%ikev2-xchg-dropnoninitnoikesa%,%ikev2-xchg-
dropinvmsgid%,%ikev2-xchg-dropinvmajver%,%ikev2-xchg-dropikesaerr%,%ikev2-xchg-
dropunkcrit%,%ikev2-xchg-dropretransdisc%,%ikev2-notif-cooksent%,%ikev2-notif-
cookrecv%,%ikev2-notif-cookmatch%,%ikev2-notif-cooknotmatch%,%ikev2-notif-
multauthsupp%,%ikev2-notif-anothauth%,%ikev2-rekey-ikesareqsent%,%ikev2-rekey-
ikesareqrcvd%,%ikev2-rekey-ikesarspsent%,%ikev2-rekey-ikesarsprcvd%,%ikev2-
rekey-ikesaignored%,%ikev2-rekey-childsareqsent%,%ikev2-rekey-
childsareqrecv%,%ikev2-rekey-childsarspsent%,%ikev2-rekey-
childsarsprcvd%,%ikev2-rekey-childsaignored%,%ikev2-mobike-sent%,%ikev2-mobike-
recv%,%ikev2-mobike-ignored%,%ikev2-misc-ikesacrefail%,%ikev2-misc-
saflowopfail%,%ikev2-notifpaysent-invke%,%ikev2-notifpaysent-invmajver%,%ikev2-
notifpaysent-invmgid%,%ikev2-notifpaysent-invsyn%,%ikev2-notifpaysent-noprop%
```

```
schema systemSch5 format EMS,PDSNSystem5,%date%,%time%,%ikev2-
notifpaysent-tsunaccept%,%ikev2-notifpaysent-unsuppcrit%,%ikev2-notifpaysent-
intfail%,%ikev2-notifpayrecv-invke%,%ikev2-notifpayrecv-invmajver%,%ikev2-
notifpayrecv-invmgid%,%ikev2-notifpayrecv-invsyn%,%ikev2-notifpayrecv-
```

```

noproprop%,%ikev2-notifpayrecv-tsunaccept%,%ikev2-notifpayrecv-unsuppcrit%,%ikev2-
decfail-pktfail%,%ikev2-decfail-interr%,%ikev2-decfail-iphdr%,%ikev2-decfail-
udphdr%,%ikev2-decfail-ikehdr%,%ikev2-decfail-ikehdrpay%,%ikev2-decfail-
ikehdrnitspi%,%ikev2-decfail-ikehdrrrspspi%,%ikev2-decfail-ikehdrmajver%,%ikev2-
decfail-ikehdrminver%,%ikev2-decfail-ikehdrxchgtyp%,%ikev2-decfail-
ikehdrrecvflag%,%ikev2-decfail-ikehdrrlen%,%ikev2-decfail-syn%,%ikev2-decfail-
paysyn%,%ikev2-decfail-paylen%,%ikev2-decfail-unkcritpay%,%ikev2-decfail-
toomanypay%,%ikev2-decfail-sapaylen%,%ikev2-decfail-saprophdr%,%ikev2-decfail-
saprophdrrecv%,%ikev2-decfail-toomanytrans%,%ikev2-decfail-saprophdrrlen%,%ikev2-
decfail-toomanyprop%,%ikev2-decfail-1stsapropnum%,%ikev2-decfail-
saprotid%,%ikev2-decfail-sapropnum%,%ikev2-decfail-translen%,%ikev2-decfail-
transhdr%,%ikev2-decfail-transhdrrecv%,%ikev2-decfail-transtype%,%ikev2-decfail-
transid%,%ikev2-decfail-kepaylen%,%ikev2-decfail-kedhgrp%,%ikev2-decfail-
kedhgrpplen%,%ikev2-decfail-idpaylen%,%ikev2-decfail-idpaytype%,%ikev2-decfail-
authpaylen%,%ikev2-decfail-noncepaylen%,%ikev2-decfail-notifpaylen%,%ikev2-
decfail-notifpayspilen%,%ikev2-decfail-notifpaynat%,%ikev2-decfail-
notifpayprotid%,%ikev2-decfail-eappaylen%,%ikev2-decfail-notifpayrekey%,%ikev2-
decfail-cppaylen%,%ikev2-decfail-notifpaycook%,%ikev2-decfail-tspaylen%,%ikev2-
decfail-cppayattrlen%,%ikev2-decfail-tspayrecv%,%ikev2-decfail-
encrpaylen%,%ikev2-decfail-tspaytstype%,%ikev2-decfail-unsuppcritpay%,%ikev2-
decfail-unsuppcertpay%

```

```

schema systemSch6 format EMS,PDSNSystem6,%date%,%time%,%ikev2-
decfail-unsuppnnotifprotah%,%ikev2-decfail-unsuppauthmeth%,%ikev2-decfail-
unsupppaycritvid%,%ikev2-decfail-unsuppmeth%,%ikev2-decfail-unkerr%,%ikev2-
decfail-unsuppsapayprotah%,%ikev2-decfail-unsupptspaytsnum%,%ikev2-decfail-
unsupptspaytstype%,%ikev2-decfail-unsupptspaytsprot%,%ikev2-decfail-
cppaynoipattr%,%ikev2-decfail-cppayunkattr%,%ikev2-decryptfail%,%ikev2-
decryptfail-hmac%,%ikev2-decryptfail-pad%,%ikev2-xchg-badmsgid%,%ikev2-xchg-
badresp%,%ikev2-xchg-stalemsgid%,%ikev2-xchg-unkerr%,%ikev2-xchg-
statelookfail%,%ikev2-notifrecv-unsuppcritpay%,%ikev2-notifrecv-
invikespi%,%ikev2-notifrecv-invmajver%,%ikev2-notifrecv-invsyn%,%ikev2-
notifrecv-invmmsgid%,%ikev2-notifrecv-invspi%,%ikev2-notifrecv-
nopropropchosen%,%ikev2-notifrecv-invkepay%,%ikev2-notifrecv-authfail%,%ikev2-
notifrecv-singpairreq%,%ikev2-notifrecv-noaddsa%,%ikev2-notifrecv-
intaddrfail%,%ikev2-notifrecv-failcpreq%,%ikev2-notifrecv-tsunaccept%,%ikev2-
notifrecv-invsel%,%ikev2-notifrecv-unacceptaddr%,%ikev2-notifrecv-
multiauthsupp%,%ikev2-notifrecv-anothauthfoll%,%ikev2-notifrecv-
unexpectnat%,%ikev2-notifrecv-macauthfail%,%ikev2-notifrecv-
hsserrusrunk%,%ikev2-notifrecv-initcont%,%ikev2-notifrecv-windsiz%,%ikev2-
notifrecv-addtsposs%,%ikev2-notifrecv-ipcompsupp%,%ikev2-notifrecv-
natdetsrcip%,%ikev2-notifrecv-natdetdstip%,%ikev2-notifrecv-cookie%,%ikev2-
notifrecv-usetransmode%,%ikev2-notifrecv-httpcertsupp%,%ikev2-notifrecv-
rekeysa%,%ikev2-notifrecv-nonfirstfragalso%,%ikev2-notifrecv-mobikesupp%,%ikev2-
notifrecv-addip4addr%,%ikev2-notifrecv-addip6addr%,%ikev2-notifrecv-
noaddaddr%,%ikev2-notifrecv-updsaaddr%,%ikev2-notifrecv-cookie2%,%ikev2-
notifrecv-nonatallow%,%ikev2-notifrecv-other%,%ikev2-notifrecv-
sipfallbnotallow%,%ikev2-notifrecv-esptfcpadnotsupp%

```

```

schema systemSch7 format EMS,PDSNSystem7,%date%,%time%,%ikev2-
notifrecv-congrejrecv%,%ikev2-cert-reqsent%,%ikev2-cert-regrecv%,%ikev2-cert-
sent%,%ikev2-cert-recv%,%crypto-txesppacket%,%crypto-txespoctet%,%crypto-

```

```
txahpacket%,%crypto-txahoctet%,%crypto-rxesppacket%,%crypto-rxespoctet%,%crypto-
rxahpacket%,%crypto-rxahoctet%,%crypto-errauthpacket%,%crypto-
errauthoctet%,%crypto-errbadrecpacket%,%crypto-errbadrecoctet%,%crypto-
errdiscpacket%,%crypto-errdiscocet%,%crypto-errignpacket%,%crypto-
errignoctet%,%crypto-errunderrunpacket%,%crypto-errunderrunocet%,%crypto-
errinvpacket%,%crypto-errinvocet%,%crypto-errreplaypacket%,%crypto-
errreplayoctet%,%sess-total-curr%,%sess-total-setup%,%total-released%,%dhcp-msg-
discover-rx%,%dhcp-msg-discover-retried-rx%,%dhcp-msg-offer-rx%,%dhcp-msg-offer-
tx%,%dhcp-msg-request-rx%,%dhcp-msg-request-renewal-rx%,%dhcp-msg-ack-tx%,%dhcp-
msg-ack-renewing-tx%,%dhcp-msg-nak-tx%,%dhcp-msg-release-tx%,%dhcp-
curservsess%,%dhcp-ttlservsess%,%dhcp-servdisc-admin%,%dhcp-servdisc-
callterm%,%dhcp-servdisc-leasetmo%,%dhcp-servdisc-other%,%phsgw-
3partyauthsucc%,%phsgw-3partyauthfailures%,%sess-maxpdsn%,%sess-maxha%,%sess-
maxl2tplns%,%sess-maxecsv2%,%sess-maxevdoreva-pdsn%,%lic-ipsg%,%sess-
maxipsg%,%sess-maxasngw%,%sess-maxasnlr%,%sess-curaaaacctitemsused%,%sess-
curaaaacctitemsmax%,%sess-curaaabuffused%,%sess-curaaabuffmax%,%sess-
ttlaaacanauth%,%sess-ttlaaaacctpurged%,%sess-ttlradacctpurged%,%aaa-
curallocreq%,%aaa-curmaxreq%,%aaa-ttldiamauthreq%,%aaa-curdiamauthreq%,%aaa-
ttldiamauthreqretried%,%aaa-ttldiamauthreqdrop%,%aaa-ttlradauthrspdrop%,%aaa-
ttlradacctcancelled%,%aaa-ttlradacctpurged%,%aaa-ttlradacctrspdropped%,%aaa-
ttlmgrpurgedrequests%,%diamauth-msg-mareq%,%diamauth-msg-maans%,%diamauth-msg-
marretry%
```

```
schema systemSch8 format EMS,PDSNSystem8,%date%,%time%,%diamauth-
msg-matimeout%,%diamauth-msg-maadropped%,%diamauth-msg-sareq%,%diamauth-msg-
saans%,%diamauth-msg-sarretry%,%diamauth-msg-saamtimeout%,%diamauth-msg-
saadropped%,%diamauth-msg-uareq%,%diamauth-msg-uaans%,%diamauth-msg-
uarretry%,%diamauth-msg-uaamtimeout%,%diamauth-msg-uaadropped%,%diamauth-msg-
lireq%,%diamauth-msg-lians%,%diamauth-msg-lirretry%,%diamauth-msg-
liamtimeout%,%diamauth-msg-liadropped%,%diamauth-msg-rtreq%,%diamauth-msg-
rtans%,%diamauth-msg-rtreject%,%diamauth-msg-ppreq%,%diamauth-msg-
ppans%,%diamauth-msg-pprreject%,%diamauth-msg-dereq%,%diamauth-msg-
deans%,%diamauth-msg-deaaccept%,%diamauth-msg-deareject%,%diamauth-msg-
derretry%,%diamauth-msg-deamtimeout%,%diamauth-msg-deadropped%,%diamauth-msg-
asr%,%diamauth-msg-asa%,%diamauth-msg-rar%,%diamauth-msg-raa%,%diamauth-msg-
str%,%diamauth-msg-sta%,%diamauth-msg-strretry%,%diamauth-demsgerr-
proto%,%diamauth-demsgerr-badans%,%diamauth-demsgerr-unksessreq%,%diamauth-
demsgerr-unkcnd%,%diamauth-demsgerr-regtmo%,%diamauth-demsgerr-parse%,%diamauth-
demsgerr-regretry%,%diamauth-strterm-logout%,%diamauth-strterm-
noserv%,%diamauth-strterm-badans%,%diamauth-strterm-admin%,%diamauth-strterm-
linkbroken%,%diamauth-strterm-authexp%,%diamauth-strterm-usermoved%,%diamauth-
strterm-sesstmo%,%diamauth-strterm-userreq%,%diamauth-strterm-
lostcarrier%,%diamauth-strterm-lostsvc%,%diamauth-strterm-idletmo%,%diamauth-
strterm-nastmo%,%diamauth-strterm-adminreset%,%diamauth-strterm-
adminreboot%,%diamauth-strterm-port%,%diamauth-strterm-naserr%,%diamauth-
strterm-nasreq%,%diamauth-strterm-nasreboot%
```

```
schema systemSch9 format EMS,PDSNSystem9,%date%,%time%,%diamauth-
strterm-portunneed%,%diamauth-strterm-portpreempt%,%diamauth-strterm-
portsusp%,%diamauth-strterm-svcunavail%,%diamauth-strterm-cback%,%diamauth-
strterm-user%,%diamauth-strterm-hostreq%,%diamacct-msg-acreq%,%diamacct-msg-
acans%,%diamacct-msg-acrstart%,%diamacct-msg-acastart%,%diamacct-msg-
```

```

acrstartretry%,%diameterct-msg-acastarttmo%,%diameterct-msg-acrinterim%,%diameterct-
msg-acainterim%,%diameterct-msg-acrinterimretry%,%diameterct-msg-
acainterimtmo%,%diameterct-msg-acrevent%,%diameterct-msg-acaevent%,%diameterct-msg-
acrstop%,%diameterct-msg-acastop%,%diameterct-msg-acrstopretry%,%diameterct-msg-
acastoptmo%,%diameterct-msg-acadropped%,%diameterct-acmsgerr-PROTO%,%diameterct-
acmsgerr-badans%,%diameterct-acmsgerr-unksessreq%,%diameterct-acmsgerr-
unkcmdcode%,%diameterct-acmsgerr-regtmo%,%diameterct-acmsgerr-parse%,%diameterct-
acmsgerr-recretry%,%ike-udpflows%,%ike-cookieflows%,%ike-txpackets%,%ike-
rxpackets%,%ike-reqrecv%,%ike-udpflowpackets%,%ike-cookieflowpackets%,%ikev2-
congrej%,%ikev2-congdrop%,%ikev2-unxchgspi%,%ikev2-notifpaysent-
noaddsa%,%ikev2-notifpayrecv-noaddsa%,%phsgw-retriesexhaust%,%phsgw-uplink-
sfs%,%phsgw-downlink-sfs%,%phspc-retriesexhaust%,%phspc-cursess%,%phspc-total-
sess-setup%,%phspc-tidfail%,%phspc-locupdate-attempt%,%phspc-locupdate-
denied%,%phspc-locupdate-comp%,%phspc-paging-attempt%,%phspc-paging-
succ%,%phsgw-cursess%,%phsgw-cur-active-call%,%phsgw-total-sess-setup%,%phsgw-
tidfail%,%phsgw-handoffattempt%,%phsgw-handoffdenied%,%phsgw-
handoffcomp%,%phsgw-authsucc%,%phsgw-authfailures%,%dhcp-msg-release-rx%,%sess-
setuptime-18sec%,%sess-setuptime-over18sec%,%lic-combo-3g4g-gw%,%ssl-
cursess%,%ssl-curconninit%,%ssl-curconnresp%,%ssl-curconnected%,%ssl-
curconnfail%,%ssl-curconnecting%,%ssl-conclosesent%,%ssl-conclocsercvd%,%ssl-
cachehits%

```

```

schema systemSchA format EMS,PDSNSystemA,%date%,%time%,%ssl-
cachemiss%,%ssl-cachetimeout%,%ssl-cachefull%,%ssl-cachetotalsess%,%ssl-
txrecord%,%ssl-txmsg%,%ssl-txbyte%,%ssl-rxrecord%,%ssl-rxmsg%,%ssl-rxbyte%,%ssl-
encerr%,%ssl-decerr%,%ssl-decryerr%,%ssl-autherr%,%ssl-failinithserr%,%ssl-
failtimeouthserr%,%ssl-failresphserr%,%ssl-alertrecv%,%ssl-alertrecv-
unexpmsg%,%ssl-alertrecv-badrecmac%,%ssl-alertrecv-decryfail%,%ssl-alertrecv-
compfail%,%ssl-alertrecv-recoflow%,%ssl-alertrecv-handshake%,%ssl-alertrecv-
illparm%,%ssl-alertrecv-certunsupp%,%ssl-alertrecv-certbad%,%ssl-alertrecv-
certexpir%,%ssl-alertrecv-certrevok%,%ssl-alertrecv-certunk%,%ssl-alertrecv-
acddeny%,%ssl-alertrecv-decode%,%ssl-alertrecv-decryerr%,%ssl-alertrecv-
export%,%ssl-alertrecv-protover%,%ssl-alertrecv-interr%,%ssl-alertrecv-
insuffsec%,%ssl-alertrecv-usercanc%,%ssl-alertrecv-noreneg%,%ssl-alertrecv-
unknownca%,%ssl-alertsent%,%ssl-alertsent-unexpmsg%,%ssl-alertsent-
badrecmac%,%ssl-alertsent-decryfailed%,%ssl-alertsent-recoflow%,%ssl-alertsent-
handshake%,%ssl-alertsent-illparam%,%ssl-alertsent-acddenied%,%ssl-alertsent-
decodeerror%,%ssl-alertsent-decrypterror%,%ssl-alertsent-export%,%ssl-alertsent-
protover%,%ssl-alertsent-interr%,%ssl-alertsent-noregen%,%ssl-alertsent-unknown%

```

ppp schema pppSch1 format

```

EMS,PPP1,%date%,%time%,%vpnname%,%vpnid%,%servname%,%init%,%reneg%,%success%,%fa-
iled%,%released%,%released-local%,%released-remote%,%lcp-fail-maxretry%,%lcp-
fail-option%,%ipcp-fail-maxretry%,%ipcp-fail-option%,%fail-ccp%,%fail-
auth%,%entered-lcp%,%entered-auth%,%entered-ipcp%,%reneg-pdsn%,%reneg-
mobile%,%reneg-addrmis%,%reneg-other%,%auth-attempt-chap%,%auth-attempt-
ppp%,%auth-attempt-mschap%,%auth-success-chap%,%auth-success-pap%,%auth-success-
mschap%,%auth-fail-chap%,%auth-fail-pap%,%auth-fail-mschap%,%comp-stac%,%comp-
mppc%,%comp-defl%,%rcverr-basfcs%,%rcverr-unknproto%,%rcverr-badaddr%,%rcverr-
badctrl%,%comp-vjhdr%,%disc-lcp-remote%,%disc-rp-remote%,%disc-admin%,%disc-
idle-timeout%,%disc-abs-timeout%,%disc-ppp-keepalive%,%disc-no-resource%,%disc-
misc%,%remote-term%,%misc-fail%

```

```

 ppp schema pppSch2 format
EMS, PPP2, %date%, %time%, %vpnname%, %vpnid%, %servname%, %fail-reneg%, %lcp-fail-
unknown%, %ipcp-fail-unknown%, %abort-auth%, %rp-disc%, %success-lcp%, %success-
auth%, %reneg-rp_handoff%, %reneg-update%, %auth-abort-chap%, %auth-abort-
pap%, %auth-abort-mschap%, %sess-skip-auth%, %comp-sess-neg%, %comp-sess-neg-
fail%, %disc-rp-local%, %disc-add-flow-fail%, %disc-maxretry-lcp%, %disc-maxretry-
ipcp%, %disc-max-setup-time%, %disc-bad-dest-vpn%, %disc-opt-neg-lcp%, %disc-opt-
neg-ipcp%, %disc-no-remoteaddr%, %disc-typedetect-fail%, %disc-bad-src-addr%, %disc-
remote%, %disc-long-timeout%, %disc-auth-fail%, %lcpecho-req-total%, %lcpecho-req-
resent%, %lcpecho-rep-recved%, %lcpecho-timeout%, %recverr-ctrl-field%, %recverr-
bad-length%, %in-oct%, %in-ucast%, %in-nucast%, %in-pkt%, %in-discard%, %in-discard-
oct%, %out-oct%, %out-ucast%, %out-nucast%, %out-pkt%, %out-discard%, %out-discard-
oct%, %num-sessions%, %lcpvse-req-total%, %lcpvse-req-resent%, %lcpvse-rep-
recved%, %lcpvse-proto-reject%, %lcpvse-req-maxreach%, %svctype%, %conn-sess-
reneg%, %comp-rohchr%, %altppp-connected%, %reneg-rp_handoff%, %auth-attempt-
pap%, %auth-attempt-mschap%

```

```

 fa schema mipfaSch1 format
EMS, MIPFA1, %date%, %time%, %vpnname%, %vpnid%, %servname%, %advert-send%, %disc-
expiry%, %disc-dereg%, %disc-admin%, %auth-attempt%, %auth-success%, %auth-
failure%, %recv-total%, %recv-initial%, %recv-renewal%, %recv-dereg%, %accept-
total%, %accept-initial%, %accept-renewal%, %accept-dereg%, %denied-total%, %denied-
initial%, %denied-renewal%, %denied-dereg%, %discard-total%, %discard-
initial%, %discard-renewal%, %discard-dereg%, %relayed-total%, %relayed-
initial%, %relayed-renewal%, %relayed-dereg%, %authfail-total%, %authfail-
initial%, %authfail-renewal%, %authfail-dereg%, %denied-pdsn-total%, %denied-pdsn-
initial%, %denied-pdsn-renewal%, %denied-pdsn-dereg%, %denied-ha-total%, %denied-ha-
initial%, %denied-ha-renewal%, %denied-ha-dereg%, %denied-pdsn-unspec%, %denied-
pdsn-timeout%, %denied-pdsn-admin%, %denied-pdsn-resource%, %denied-pdsn-
mnauth%, %denied-pdsn-haauth%, %denied-pdsn-lifetoolong%, %denied-pdsn-
badreq%, %denied-pdsn-badreply%, %denied-pdsn-missnai%, %denied-pdsn-
misshomeagent%, %denied-pdsn-misshomeaddr%, %denied-pdsn-unkchallenge%, %denied-
pdsn-misschallenge%, %denied-pdsn-stalechallenge%, %denied-pdsn-
mntoodistant%, %denied-pdsn-styleunavail%, %denied-pdsn-hanetunreach%, %denied-
pdsn-hahostunreach%

```

```

 fa schema mipfaSch2 format
EMS, MIPFA2, %date%, %time%, %vpnname%, %vpnid%, %servname%, %denied-pdsn-
haportunreach%, %denied-pdsn-haunreach%, %denied-pdsn-invcoa%, %denied-pdsn-
encapunavail%, %denied-pdsn-revtununavail%, %denied-pdsn-revtunmand%, %denied-ha-
faauth%, %denied-ha-badreq%, %denied-ha-mismatchid%, %denied-ha-simulbind%, %denied-
ha-unknownha%, %denied-ha-revtununavail%, %replyrcv-total%, %replyrcv-
totalrelayed%, %replyrcv-errors%, %replyrcv-initial%, %replyrcv-
initialrelayed%, %replyrcv-renewal%, %replyrcv-renewalrelayed%, %replyrcv-
dereg%, %replyrcv-deregrelayed%, %replysent-total%, %replysent-
acceptreg%, %replysent-acceptdereg%, %replysent-badreq%, %replysent-
lifetoolong%, %replysent-mnauthfail%, %replysent-haauthfail%, %replysent-
adminprohib%, %replysent-noresources%, %replysent-revtununavail%, %replysent-
revtunmand%, %replysent-sendererrors%, %replysent-mntoodistant%, %replysent-
invcoa%, %replysent-hanetunreach%, %replysent-hahostunreach%, %replysent-
haportunreach%, %replysent-haunreach%, %replysent-regtimeout%, %replysent-
missnai%, %replysent-misshomeagent%, %replysent-misshomeaddr%, %replysent-

```

```

unkchallenge%,%repliesent-misschallenge%,%repliesent-stalechallenge%,%repliesent-
badreply%,%reqsent-initial%,%reqsent-initial-resend%,%reqsent-initial-
noresend%,%reqsent-renew%,%reqsent-renew-resend%,%reqsent-renew-
noresend%,%reqsent-dereg%,%reqsent-dereg-resend%,%reqsent-dereg-
noresend%,%denied-pdsn-unkchallenge%,%denied-pdsn-unknowncvse%,%repliesent-
unspecified%,%repliesent-
delstyleunavail%,%ttlprepaid%,%curprepaid%,%ttlonlineauthsucc%,%ttlonlineauthfail%,%revoc-sent%,%revoc-retry-sent%,%revoc-ack-recv%,%revoc-timeout%,%revoc-recv%,%revoc-ack-sent%

```

```

ha schema miphaSch1 format

```

```

EMS,MIPHA,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%disconnects%,%expiry%,%der
eg%,%admindrop%,%recv-total%,%recv-initial%,%recv-renew%,%recv-dereg%,%accept-
total%,%accept-reg%,%accept-renew%,%accept-dereg%,%denied-total%,%denied-
initial%,%denied-renew%,%denied-dereg%,%discard-total%,%reply-total%,%reply-
acceptreg%,%reply-acceptdereg%,%reply-denied%,%reply-badreq%,%reply-
mismatchid%,%reply-adminprohib%,%reply-unspecerr%,%reply-noresource%,%reply-
mnauthfail%,%reply-faauthfail%,%reply-simulbind%,%reply-unknownha%,%reply-
revtununavail%,%reply-revtunmand%,%reply-encapunavail%,%reply-
sendererror%,%farevocation%,%accept-ho%,%denied-ho%,%reply-error%,%num-
sessions%,%recv-ho%,%revoc-sent%,%revoc-retry-sent%,%revoc-ack-recv%,%revoc-
timeout%,%revoc-recv%,%revoc-ack-sent%,%miscerror%,%auth-attempt%,%auth-
failure%,%auth-success%,%auth-real-failure%,%auth-misc-failure%,%reply-
unknowncvse%,%reply-cong-drop%,%reply-cong-adminprohib%,%reply-cong-
unknownha%,%reply-udp-
encapunavail%,%ttlprepaid%,%curprepaid%,%ttlonlineauthsucc%,%ttlonlineauthfail%,
%paaa-query-total%,%paaa-query-accept%,%paaa-query-denied%,%paaa-resp-
sent%,%paaa-resp-found%,%paaa-resp-notfound%,%paaa-resp-poolover%,%paaa-resp-
misc%,%ipsec-esp-txpackets%,%ipsec-esp-txbytes%,%ipsec-ah-txpackets%,%ipsec-ah-
txbytes%,%ipsec-error-txpackets%,%ipsec-error-txbytes%,%ipsec-esp-
rxpackets%,%ipsec-esp-rxbytes%,%ipsec-ah-rxpackets%,%ipsec-ah-rxbytes%,%ipsec-
error-packets%,%ipsec-error-bytes%,%ipsec-replay-packets%,%ipsec-replay-
bytes%,%ipsec-decode-packets%,%ipsec-decode-bytes%,%ipsec-auth-packets%,%ipsec-
auth-bytes%,%ipsec-tooshort-packets%,%ipsec-tooshort-bytes%,%ipsec-dpdreq-
sent%,%ipsec-dpdreq-recv%,%ipsec-dpdreply-sent%,%ipsec-dpdreply-recv%,%ipsec-
dpdtimeout%,%ipsec-dpddisconn%,%ipsec-dpdrekey%

```

```

ha schema miphaSch2 format

```

```

EMS,MIPHA2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%ipsec-nattkeepalive-
sent%,%ipsec-nattkeepalive-recv%,%ipsec-ike-udpflows%,%ipsec-ike-
cookieflows%,%ipsec-ike-txpackets%,%ipsec-ike-rxpackets%,%ipsec-ike-
reqrecv%,%ipsec-ike-udpflowpackets%,%ipsec-ike-cookieflowpackets%,%ipsec-cur-
tun%,%ipsec-cur-tunestablished%,%ipsec-ike-fails%,%ipsec-ttl-tun%,%ipsec-ttl-
tunestablished%,%ipsec-call-req-rej%

```

```

rp schema rpSch1 format

```

```

EMS,RP,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%recv-total%,%accept-
total%,%denied-total%,%discard-total%,%accept-initial%,%accept-
intrapdsn%,%accept-interpdsn%,%denied-initial%,%accept-renew%,%denied-
renew%,%accept-dereg%,%denied-dereg%,%send-error%,%hash-error%,%decode-
error%,%unhandled%,%seqerror%,%deny-unspec%,%deny-adminprohib%,%deny-
noresource%,%deny-auth%,%deny-idmismatch%,%deny-badrequest%,%deny-
unknownpdsn%,%deny-revtununavail%,%deny-revtunreq%,%deny-unrecogvend%,%upd-

```

```

total%,%upd-accept%,%upd-denied%,%upd-unack%,%upd-trans%,%upd-retrans%,%upd-
received%,%upd-discard%,%upd-senderror%,%upd-upltrinit%,%upd-other%,%upd-
handoff%,%upddeny-unspec%,%upddeny-adminprohib%,%upddeny-auth%,%upddeny-
idmismatch%,%upddeny-badrequest%,%sec-violations%,%sec-badauth%,%sec-
badid%,%sec-badspi%,%sec-mnhaauth%,%sec-regupdate%,%disc-absent%,%disc-
nomem%,%disc-malform%,%disc-authfail%,%disc-bounce%,%disc-inputq%,%disc-
mismatchid%,%disc-invpktlen%,%disc-misc%,%reply-total%,%recv-initial%,%accept-
active-intrapdsn%,%accept-dormant-intrapdsn%,%recv-renew%,%active-start-
renew%,%active-stop-renew%,%recv-dereg%,%active-stop-dereg%,%upd-
ttlnoetrans%,%upd-ack-received%,%num-sessions%,%deny-sessclosed%,%deny-cong-
drop%,%deny-cong-adminprohib%,%deny-cong-unknownpdsn%,%sess-num-
transmitted%,%sess-accepted%,%sess-denied%,%sess-not-acknowledged%,%sess-
initial-update%,%sess-update-retransmitted%,%sess-update-ack-received%,%sess-
update-ack-discarded%,%sess-update-send-error%,%sess-always-on-
indication%,%sess-reason-unspecified%,%sess-PDSN-auth-fail%,%sess-ID-
mismatch%,%sess-poorly-formed-update%,%sess-para-not-update%,%sess-
absent%,%sess-no-memory%,%sess-malformed%,%sess-auth-fail%,%sess-ID-bounce-
error%,%sess-input-Q-exceeded%,%sess-mismatched-ID%,%sess-invalid-packet-
length%,%sess-misc-reasons%,%sess-gre-packet-sent-sdb%,%sess-gre-byte-sent-
sdb%,%ttlprepaid%,%curprepaid%,%ttlonlineauthsucc%,%ttlonlineauthfail%,%discard-
initial%,%recv-initial-setupstart%,%accept-initial-setupstart%,%denied-initial-
setupstart%,%discard-initial-setupstart%,%discard-renew%,%recv-renew-
noairlink%,%accept-renew-noairlink%,%denied-renew-noairlink%,%discard-renew-
noairlink%,%recv-renew-activestart%,%accept-renew-activestart%,%denied-renew-
activestart%,%discard-renew-activestart%,%recv-renew-activestop%,%accept-renew-
activestop%,%denied-renew-activestop%,%discard-renew-activestop%,%discard-
dereg%,%recv-dereg-noactivestop%,%accept-dereg-noactivestop%,%denied-dereg-
noactivestop%,%discard-dereg-noactivestop%,%recv-dereg-activestop%,%accept-
dereg-activestop%,%denied-dereg-activestop%,%discard-dereg-activestop%,%recv-
intrapdsn-activeanidhandoff%,%accept-intrapdsn-activeanidhandoff%,%denied-
intrapdsn-activeanidhandoff%,%discard-intrapdsn-activeanidhandoff%,%recv-
intrapdsn-dormantanidhandoff%,%accept-intrapdsn-dormantanidhandoff%,%denied-
intrapdsn-dormantanidhandoff%,%discard-intrapdsn-dormantanidhandoff%,%recv-
interpdsn-activemeianidhandoff%,%accept-interpdsn-activemeianidhandoff%,%denied-
interpdsn-activemeianidhandoff%,%discard-interpdsn-activemeianidhandoff%,%rx-
pkt-xoff%,%rx-pkt-xon%,%xontoxoff%,%pkt-dropped-xoff%,%bytes-dropped-xoff%

```

rp schema rpSch2 format

```

EMS,RP2,%date%,%time%,%vpnname%,%vpnid%,%servname%,%a10-cursetup%,%a10-
ttlreleased%,%a10-ttlsetup%,%a10aux-cursetup%,%a10aux-ttlreleased%,%a10aux-
ttlsetup%,%a10main-cursetup%,%a10main-ttlreleased%,%a10main-ttlsetup%,%deny-
badrequest-alractive%,%deny-badrequest-alrdorm%,%deny-badrequest-
authextn%,%deny-badrequest-fieldlen%,%deny-badrequest-flags%,%deny-badrequest-
hoanonzero%,%deny-badrequest-miscoaaddr%,%deny-badrequest-other%,%deny-
badrequest-pktttoolong%,%deny-badrequest-pktttooshort%,%deny-badrequest-
setupabsent%,%deny-badrequest-sse%,%deny-badrequest-unkextn%,%deny-badrequest-
vse%,%deny-noresource-allmgrrej%,%deny-noresource-inputq%,%deny-noresource-
nomem%,%deny-noresource-noessmgr%,%deny-noresource-policy%,%deny-noresource-
sessmgrrej%,%deny-noresource-sessmgrretrieved%,%deny-unspec-crphandoff%,%deny-
unspec-intrahandoff%,%deny-unspec-lifezero%,%deny-unspec-noairlink%,%deny-
unspec-notready%,%deny-unspec-nullpkt%,%reva-rrq-accept%,%reva-rrq-
denied%,%reva-rrq-recv%,%reva-rrq-reply%,%rrqdiscard-adminprohib%,%rrqdiscard-

```

```

authfail%,%rrqdiscard-bounce%,%rrqdiscard-grekey%,%rrqdiscard-
inputq%,%rrqdiscard-invlen%,%rrqdiscard-maxsess%,%rrqdiscard-misc%,%rrqdiscard-
nomem%,%rrqdiscard-nosessmgr%,%rrqdiscard-overload%,%rrqdiscard-
smgrdead%,%rrqdiscard-smgrnotready%,%rrqdiscard-unkpdsn%,%sess-
currevasetup%,%sess-cursetup%,%sess-release-dereg%,%sess-release-expiry%,%sess-
release-grekey%,%sess-release-other%,%sess-release-pcfmonfail%,%sess-release-
ppplayer%,%sess-ttlreleased%,%sess-ttlrevasetup%,%sess-ttlsetup%,%sess-
updackdisc-pktnothand%,%sess-updackdisc-sessdisc%,%sess-upddenied-
adminprohib%,%sess-upddenied-handoff%,%sess-upddenied-idnotsupp%,%sess-
upddenied-noresource%,%sess-updreason-alwayson%,%sess-updreason-qosinfo%,%sess-
updreason-qosoptrig%,%sess-updreason-qostftviol%,%sess-updreason-
qostrafpol%,%sess-updreason-qostrafviol%,%upd-discard-unhpk%,%upd-discard-
unkpcf%,%upd-lifetime%,%upd-smgrexit%

```

#### rp schema rpSch3 format

```

EMS,RP3,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%sess-ttlrevareleased%,%sess-
ttlrevadowngrade%,%deny-bsninfo%,%upd-uplyrinit%,%upd-discard-absent%,%upd-
discard-nomem%,%upd-discard-malform%,%upd-discard-authfail%,%upd-discard-
bounce%,%upd-discard-inputq%,%upd-discard-mismatchid%,%upd-discard-
invpktlen%,%upd-discard-misc%,%sess-pdsn-auth-fail%,%sess-id-mismatch%,%sess-
release-purged%

```

#### gtpc schema gtpcSch1 format

```

EMS,GTPC1,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%setup-total%,%setup-
ip%,%setup-ppp%,%released-total%,%cpc-total%,%cpc-v0%,%cpc-v1%,%cpc-sec%,%cpc-
retrans%,%cpc-accept%,%cpc-deny%,%cpc-discard%,%upc-rx%,%upc-rx-accept%,%upc-rx-
deny%,%upc-rx-discard%,%upc-tx%,%upc-tx-accept%,%upc-tx-deny%,%dpc-rx%,%dpc-rx-
accept%,%dpc-rx-deny%,%dpc-rx-discard%,%dpc-tx%,%dpc-tx-accept%,%dpc-tx-
deny%,%cpc-aa%,%cpc-aa-accept%,%cpc-aa-deny%,%cpc-aa-discard%,%dpc-aa-rx%,%dpc-
aa-rx-accept%,%dpc-aa-rx-deny%,%dpc-aa-rx-discard%,%dpc-aa-tx%,%dpc-aa-tx-
accept%,%dpc-aa-tx-deny%,%err-ind-rx%,%err-ind-tx%,%cpc-noresource%,%cpc-addr-
occupied%,%cpc-nomem%,%cpc-missing-apn%,%cpc-unknown-pdp%,%cpc-auth-fail%,%cpc-
sys-fail%,%cpc-sem-tft%

```

#### gtpc schema gtpcSch2 format

```

EMS,GTPC2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%cpc-syn-tft%,%cpc-sem-
pktfilter%,%cpc-syn-pktfilter%,%cpc-ie-err%,%cpc-ie-missing%,%cpc-opt-ie-
err%,%cpc-malformed%,%cpc-version%,%disc-sgsn%,%disc-path-fail%,%disc-smgr-
dead%,%disc-admin%,%disc-other%,%disc-teardown%,%disc-idle%,%disc-
absolute%,%disc-src-addr%,%disc-flow-add%,%disc-dhcp-renew-fail%,%disc-long-
durn%,%disc-aborted%,%disc-apn-rmvd%,%pdu-notif%,%pdu-notif-accpet%,%pdu-notif-
deny%,%pdu-notif-rej%,%pdu-notif-rej-accept%,%pdu-notif-rej-deny%,%pdu-notif-
rej-discard%,%sri-req%,%sri-accept%,%sri-deny%,%fail-rep%,%fail-rep-
accept%,%fail-rep-deny%,%note-ms-gprs%,%note-ms-gprs-accept%,%note-ms-gprs-
deny%,%note-ms-gprs-discard%,%num-bytes-in%,%num-pkts-in%,%num-bytes-out%,%num-
pkts-out%,%cpc-srv-not-supp%,%gtpu-echo-req-rx%,%gtpu-echo-req-tx%,%gtpu-echo-
rsp-tx%,%gtpu-echo-rsp-rx%,%ctrl-num-bytes-in%,%ctrl-num-pkts-in%,%ctrl-num-
bytes-out%,%ctrl-num-pkts-out%,%echo-req-rx%,%echo-req-tx%,%echo-rsp-tx%,%echo-
rsp-rx%,%setup-current%,%current-ip%,%current-ppp%,%current-ipv6%,%current-
ntwkinitd%,%setup-ipv6%,%setup-sgsn%,%setup-ggsn%,%qosconv-bytes-in%,%qosconv-
pkts-in%,%qosconv-bytes-out%,%qosconv-pkts-out%,%qosstrm-bytes-in%,%qosstrm-
pkts-in%,%qosstrm-bytes-out%,%qosstrm-pkts-out%,%qosintl-bytes-in%,%qosintl-
pkts-in%,%qosintl-bytes-out%,%qosintl-pkts-out%,%qosintl2-bytes-in%,%qosintl2-

```

```
pkts-in%,%qosint2-bytes-out%,%qosint2-pkts-out%,%qosint3-bytes-in%,%qosint3-
pkts-in%,%qosint3-bytes-out%,%qosint3-pkts-out%,%qosint-bytes-in%,%qosint-pkts-
in%,%qosint-bytes-out%,%qosint-pkts-out%,%qosback-bytes-in%,%qosback-pkts-
in%,%qosback-bytes-out%,%qosback-pkts-out%,%dyn-ipv4-attempt%,%dyn-ipv6-
attempt%,%dyn-ppp-attempt%,%dyn-ipv4-success%,%dyn-ipv6-success%,%dyn-ppp-
success%,%cpc-no-apn-subscription%
```

#### gtpc schema gtpcSch3 format

```
EMS,GTPC3,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%upc-tx-dt-upd%,%num-dt-
established%,%num-dt-torn-by-sgsn%,%num-dt-recv-err-ind%,%err-ind-rx-
discard%,%current-mbms-ue%,%current-mbms-mcast%,%current-mbms-bcast%,%setup-
mbms-ue%,%setup-mbms-mcast%,%setup-mbms-bcast%,%chap-auth-attempt%,%chap-auth-
success%,%chap-auth-failure%,%pap-auth-attempt%,%pap-auth-success%,%pap-auth-
failure%,%no-auth%,%err-ind%,%ctxt-replace%,%purge-audit%,%update-handoff-
rej%,%total-handoff-fail%,%sgsn-restart-cpc-req%,%sgsn-restart-upc-req%,%sgsn-
restart-echo-rsp%,%gtpc-echo-timeout%,%gtpu-echo-timeout%,%ggsn-req-
timeout%,%version-not-sup-rx%,%version-not-sup-tx%,%sup-ext-header-rx%,%sup-ext-
header-tx%,%cmc-total%,%cmc-initial%,%cmc-retrans%,%cmc-accept%,%cmc-deny%,%cmc-
discard%,%umc-rx%,%umc-rx-accept%,%umc-rx-deny%,%umc-rx-discard%,%dmc-rx%,%dmc-
rx-accept%,%dmc-rx-deny%,%dmc-rx-discard%,%dmc-tx%,%dmc-tx-accept%,%dmc-tx-
deny%,%mbms-reg-req-total%,%mbms-reg-req-initial%,%mbms-reg-req-retrans%,%mbms-
reg-req-accept%,%mbms-reg-req-deny%,%mbms-reg-req-discard%,%mbms-ses-start-
tx%,%mbms-ses-start-tx-accept%,%mbms-ses-start-tx-deny%,%mbms-ses-stop-
tx%,%mbms-ses-stop-tx-accept%,%mbms-ses-stop-tx-deny%,%mbms-dereg-rx%,%mbms-
dereg-rx-accept%,%mbms-dereg-rx-deny%,%mbms-dereg-rx-discard%,%mbms-dereg-
tx%,%mbms-dereg-tx-accept%,%mbms-dereg-tx-deny%,%sess-in-preservation-
mode%,%transition-to-preservation-mode%,%transition-to-non-preservation-
mode%,%sess-in-focs%,%cnt-of-release-due-to-other%,%cnt-of-release-due-to-
violation%,%ipca-pdp-context-tx%,%ipca-pdp-context-tx-accepted%,%ipca-pdp-
context-tx-denied%,%ipca-reject-rx-no-resources%,%ipca-reject-rx-no-mem-
avail%,%ipca-reject-rx-sys-failure%,%ipca-reject-rx-non-existent%,%ipca-reject-
rx-unsupported-service%,%ipca-reject-rx-invalid-msg-format%
```

#### gtpc schema gtpcSch4 format

```
EMS,GTPC4,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%ipca-reject-rx-semantic-
err-in-tft%,%ipca-reject-rx-syntactic-err-in-tft%,%ipca-reject-rx-man-ie-
incorrect%,%ipca-reject-rx-semantic-err-in-pac-filter%,%ipca-reject-rx-man-ie-
missing%,%ipca-reject-rx-optional-ie-incorrect%,%ipca-reject-rx-syntactic-err-
in-pac-filter%,%ipca-reject-rx-ue-not-gprs-rsp%,%ipca-reject-rx-ue-
refuses%,%ipca-reject-rx-invalid-correlation-id%,%sess-in-odb%,%cnt-of-release-
due-to-other-odb%,%cnt-of-release-due-to-violation-odb%
```

#### gtp schema gtpSch1 format

```
EMS,GTPP,%date%,%time%,%vpnnname%,%vpnid%,%echo-req-rx%,%echo-req-tx%,%echo-rsp-
rx%,%echo-rsp-tx%,%redir-rcvd%,%redir-rsp%,%node-alive%,%node-alive-rsp%,%data-
rec-trans%,%dup-data-rec-trans%,%send-data-rec%,%rel-data-rec%,%cancel-data-
rec%,%data-rec-trans-rsp%,%delete-node%,%node-addr%,%req-accept%,%req-not-
fulfil%,%req-malform%,%version-not-suppl%,%serv-not-suppl%,%mand-ie-err%,%mand-ie-
miss%,%opt-ie-err%,%dup-already-fulfil%,%already-fulfil%,%no-resource%,%sys-
fail%,%normal-close%,%abnormal-close%,%vol-limit-close%,%time-limit-
close%,%open-req%,%aaa-acct-arch%,%rdir-sys-fail%,%rdir-txbuf-full%,%rdir-rxbuf-
full%,%other-node-dn%,%self-node-dn%,%rdir-no-res%,%rdir-serv-no%,%rdir-version-
not-suppl%,%rdir-mand-ie-miss%,%rdir-mand-ie-err%,%rdir-opt-ie-err%,%rdir-
```

```
malformed%,%rdir-rsp-sys-fail%,%gss-echo-req%,%gss-echo-rsp%,%gss-gtpp-req%,%gss-gtpp-req-ret%,%gss-gtpp-rsp%,%gss-gtpp-rsp-failed%,%gss-gcdr-req%,%gss-gcdr-req-ret%,%gss-gcdr-rsp%,%gss-gcdr-rsp-failed%,%gss-aaaproxy-rec-req%,%gss-aaaproxy-rec-ret%,%gss-aaaproxy-rec-rsp%,%gss-aaaproxy-rec-rsp-failed%,%gss-aaamgr-rec-req%,%gss-aaamgr-rec-ret%,%gss-aaamgr-rec-rsp%,%gss-aaamgr-rec-rsp-failed%,%gss-update-cgf-req%,%gss-update-cgf-req-ret%,%gss-update-cgf-rsp%,%gss-update-cfg-rsp-failed%,%gss-clear-db-req%,%gss-clear-db-req-ret%,%gss-clear-db-rsp%,%gss-clear-db-rsp-failed%,%gss-update-req%,%gss-invalid-req-rcvd%,%data-rec-success-emp%,%cdr-dec-error%,%seq-no-incorrect%,%unknown-cause%,%mgmt-int-close%,%sgsn-chng-close%,%max-chng-close%,%rat-chng-close%,%ms-tz-chng-close%,%list-down-stream-chng-close%,%total-gcdr-xmit%,%total-scdr-xmit%,%total-mcdr-xmit%,%total-gmbcdr-xmit%,%total-gcdr-rexmit%,%total-scdr-rexmit%,%total-mcdr-rexmit%,%total-gmbcdr-rexmit%,%total-gcdr-accept%,%total-scdr-accept%
```

#### gtpp schema gtppSch2 format

```
EMS,GTTP2,%date%,%time%,%vpnnname%,%vpnid%,%total-mcdr-accept%,%total-gmbcdr-accept%,%total-gcdr-fail%,%total-scdr-fail%,%total-mcdr-fail%,%total-gmbcdr-fail%,%cc-char-hot%,%cc-char-normal%,%cc-char-prepaid%,%cc-char-flat%,%cc-char-unknown%,%data-rec-ret-send%,%data-rec-ret-poss-dup%,%data-rec-ret-cancel%,%data-rec-ret-rel%,%data-rec-ret-emp%,%data-rec-success-send%,%data-rec-success-poss-dup%,%data-rec-success-cancel%,%data-rec-success-rel%,%invalid-msg-seq-num%,%invalid-msg-unknown-cgf%,%invalid-msg-unknown-msg%,%focs-close%,%inactivity-close%,%gss-cdr-loss%,%gss-cdr-loss-traps%,%total-smbmscdr-rexmit%,%total-smbmscdr-xmit%
```

#### ippool schema ippoolSch1 format

```
EMS,IPPOOL,%date%,%time%,%vpnnname%,%vpnid%,%name%,%used%,%hold%,%release%,%free%,%type%,%priority%,%state%,%startaddr%,%groupname%
```

#### apn schema apnSch1 format

```
EMS,APN,%date%,%time%,%vpnnname%,%vpnid%,%apn%,%uplnk-bytes%,%dnlnk-bytes%,%uplnk-pkts%,%dnlnk-pkts%,%uplnk-drop%,%dnlnk-drop%,%bad-hdr%,%ttl-excd%,%frag-sent%,%frag-fail%,%inacl-drop%,%outacl-drop%,%bad-src-addr%,%addr-stat%,%addr-lpool%,%addr-rad%,%addr-dhcp%,%addr-dhcp-rly%,%addr-no-alloc%,%sess-curr%,%sess-curr-all%,%sess-tot%,%sess-tot-all%,%uplnk-bytes-drop%,%dnlnk-bytes-drop%,%data-fromuseravg-bps%,%data-touseravg-bps%,%data-fromusersust-bps%,%data-tousersust-bps%,%data-fromuseravg-pps%,%data-touseravg-pps%,%data-fromusersust-pps%,%data-tousersust-pps%,%qosconv-pkts-uplnk%,%qosconv-pkts-dnlnk%,%qosstrm-pkts-uplnk%,%qosstrm-pkts-dnlnk%,%qosint1-pkts-uplnk%,%qosint1-pkts-dnlnk%,%qosint2-pkts-uplnk%,%qosint2-pkts-dnlnk%,%qosint3-pkts-uplnk%,%qosint3-pkts-dnlnk%,%qosint-pkts-uplnk%,%qosint-pkts-dnlnk%,%qosback-pkts-uplnk%,%qosback-pkts-dnlnk%,%att-pdp-ctxt%,%att-deact-pdp-ggsn%,%succ-deact-pdp-ggsn%,%att-deact-pdp-ms%,%succ-deact-pdp-ms%,%dyn-ipv4-attempt%,%dyn-ipv6-attempt%,%dyn-ipv4-success%,%dyn-ipv6-success%,%auth-req-sent%,%auth-acc-rcvd%,%auth-timeout%,%acc-req-sent%,%acc-rsp-rcvd%,%acc-req-timeout%
```

#### lac schema lacSch1 format

```
EMS,LAC1,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%tun-conn-attempt%,%tun-conn-success%,%tun-conn-fail%,%tun-conn-curactive%,%sess-attempts%,%sess-successful%,%sess-failed%,%sess-curactive%,%sess-intrapdsno-attempt%,%sess-intrapdsno-success%,%sess-intrapdsno-failed%,%sess-interpdsno-attempt%,%recv-err-malformed%,%recv-err-ctrlfield%,%recv-err-pktlen%,%recv-err-avplen%,%recv-
```

```
err-protover%,%recv-err-md5%,%recv-err-invattr%,%recv-err-unkattr%,%recv-err-
invssid%,%recv-err-invstate%,%recv-err-unkmsg%,%recv-err-unmatchpktlen%,%recv-
err-invtunid%,%tun-genclear%,%tun-ctrlconnexists%,%tun-unauth%,%tun-
badproto%,%tun-reqshutdown%,%tun-statemacherr%,%tun-badlen%,%tun-oor%,%tun-
noresource%,%tun-vendspec%,%tun-tryanotherlns%,%tun-unkavp%,%tun-
ipsecdisc%,%tun-ipsecfail%,%tun-license%,%tun-newcallpoldisc%,%tun-
maxretry%,%tun-syslimit%,%tun-miscerr%,%sess-nogeneral%,%sess-admin%,%sess-
lossocarr%
```

lac schema lacSch2 format

```
EMS,LAC2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%sess-remoteadmin%,%sess-
nofactemp%,%sess-nofacperm%,%sess-invdest%,%sess-nocarrier%,%sess-
busysig%,%sess-nodialtime%,%sess-lactimeout%,%sess-noframing%,%sess-
noctrlconn%,%sess-badlen%,%sess-oor%,%sess-noresource%,%sess-invssid%,%sess-
vendspec%,%sess-tryanotherlns%,%sess-unkavp%,%sess-maxtunnel%,%sess-
ipsecdisc%,%sess-ipsecfail%,%sess-ipsecdisc%,%sess-newcallpoldisc%,%sess-license%,%sess-
servmismatch%,%sess-miscerr%
```

closedrp schema closedrpSch1 format

```
EMS,CLOSEDRP1,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%tun-conn-
attempt%,%tun-conn-success%,%tun-conn-fail%,%tun-conn-curactive%,%sess-
attempts%,%sess-successful%,%sess-failed%,%sess-curactive%,%sess-intrapdsnho-
attempt%,%sess-intrapdsnho-success%,%sess-intrapdsnho-failed%,%sess-interpdsnho-
attempt%,%recv-err-malformed%,%recv-err-ctrlfield%,%recv-err-pktlen%,%recv-err-
avplen%,%recv-err-protover%,%recv-err-md5%,%recv-err-invattr%,%recv-err-
unkattr%,%recv-err-invssid%,%recv-err-invstate%,%recv-err-unkmsg%,%recv-err-
unmatchpktlen%,%recv-err-invtunid%,%tun-genclear%,%tun-ctrlconnexists%,%tun-
unauth%,%tun-badproto%,%tun-reqshutdown%,%tun-statemacherr%,%tun-badlen%,%tun-
oor%,%tun-noresource%,%tun-vendspec%,%tun-tryanotherlns%,%tun-unkavp%,%tun-
ipsecdisc%,%tun-ipsecfail%,%tun-license%,%tun-newcallpoldisc%,%tun-
maxretry%,%tun-syslimit%,%tun-miscerr%,%sess-nogeneral%,%sess-admin%,%sess-
lossocarr%
```

closedrp schema closedrpSch2 format

```
EMS,CLOSEDRP2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%sess-
remoteadmin%,%sess-nofactemp%,%sess-nofacperm%,%sess-invdest%,%sess-
nocarrier%,%sess-busysig%,%sess-nodialtime%,%sess-lactimeout%,%sess-
noframing%,%sess-noctrlconn%,%sess-badlen%,%sess-oor%,%sess-noresource%,%sess-
invssid%,%sess-vendspec%,%sess-tryanotherlns%,%sess-unkavp%,%sess-
maxtunnel%,%sess-ipsecfail%,%sess-ipsecdisc%,%sess-newcallpoldisc%,%sess-
license%,%sess-servmismatch%,%sess-miscerr%,%sess-hocomplete%,%sess-
invho%,%sess-
duplsess%,%ttlprepaid%,%curprepaid%,%ttlonlineauthsucc%,%ttlonlineauthfail%
```

radius schema radiusSch1 format

```
EMS,RADIUS,%date%,%time%,%vpnnname%,%vpnid%,%servtype%,%ipaddr%,%auth-req-
sent%,%auth-req-sentwdmu%,%auth-req-pending%,%auth-req-retried%,%auth-req-
retriedwdmu%,%auth-chal-rcvd%,%auth-acc-rcvd%,%auth-rej-rcvd%,%auth-rej-
rcvdwdmu%,%auth-timeout%,%auth-cons-fail%,%auth-rsp-badauth%,%auth-rsp-
malformed%,%auth-rsp-malformedattr%,%auth-rsp-unktype%,%auth-rsp-dropped%,%auth-
rsp-roundtripusec%,%probe-issued%,%probe-success%,%probe-failed%,%probe-
roundtriptimeusec%,%acc-req-sent%,%acc-req-pending%,%acc-req-retried%,%acc-rsp-
rcvd%,%acc-req-timeout%,%acc-req-cons-fail%,%acc-rsp-badresp%,%acc-rsp-
```

```
malformed%, %acc-rsp-unktype%, %acc-rsp-dropped%, %acc-rsp-
roundtripusec%, %port%, %acc-start-sent%, %acc-stop-sent%, %acc-interim-sent%, %acc-
start-retries%, %acc-stop-retries%, %acc-interim-retries%, %group%, %acc-ttl-
g1%, %acc-ttl-g2%, %online-acc-req-sent%, %online-acc-req-pending%, %online-acc-req-
retried%, %online-acc-rsp-rcvd%, %online-acc-rej-rcvd%, %online-acc-req-
timeout%, %online-acc-rsp-badauth%, %online-acc-rsp-malformed%, %online-acc-rsp-
malformedattr%, %online-acc-rsp-unktype%, %online-acc-badmsgauth%, %online-acc-
nomsgauth%, %nasipaddr%, %keepalive-auth-req-sent%, %keepalive-auth-
retried%, %keepalive-auth-acc-rcvd%, %keepalive-auth-timeout%, %keepalive-auth-rej-
rcvd%, %keepalive-acct-req-sent%, %keepalive-acct-retried%, %keepalive-acct-
success%, %keepalive-acct-timeout%, %keepalive-acct-rsp-badauth%, %cons-
fail%, %keepalive-auth-rsp-badauth%, %keepalive-auth-rsp-malformed%, %keepalive-
auth-rsp-malformedattr%, %keepalive-auth-rsp-unktype%, %keepalive-auth-rsp-
dropped%, %acc-on-sent%, %acc-off-sent%, %acc-on-retries%, %acc-off-
retries%, %keepalive-acct-rsp-malformed%, %keepalive-acct-rsp-unktype%, %keepalive-
acct-rsp-dropped%
```

```
schema miscSch1 format
```

```
%ipaddr%, %host%, %uptime%, %time%, %localdate%, %localtime%, %localtz%, %time2%, %local
time2%
```

```
ecs schema ecsSch1 format EMS, ECS1, %date%, %time%, %ecs-
subscribers%, %ecs-subscribers-cur%, %gcdrs-generated%, %edrs-generated%, %udrs-
generated%, %ip-flows%, %ip-flows-cur%, %ip-uplk-bytes%, %ip-dwnlk-bytes%, %ip-uplk-
pkts%, %ip-dwnlk-pkts%, %ip-uplk-pkts-frag%, %ip-dwnlk-pkts-frag%, %ip-uplk-bytes-
frag%, %ip-dwnlk-bytes-frag%, %udp-flows%, %udp-flows-cur%, %udp-uplk-bytes%, %udp-
dwnlk-bytes%, %udp-uplk-pkts%, %udp-dwnlk-pkts%, %udp-inv-pkts%, %tcp-flows%, %tcp-
flows-cur%, %tcp-uplk-bytes%, %tcp-dwnlk-bytes%, %tcp-uplk-pkts%, %tcp-dwnlk-
pkts%, %tcp-uplk-bytes-retr%, %tcp-dwnlk-bytes-retr%, %tcp-uplk-pkts-retr%, %tcp-
dwnlk-pkts-retr%, %tcp-uplk-pkts-ooo-analyzd%, %tcp-dwnlk-pkts-ooo-analyzd%, %tcp-
uplk-pkts-ooo-fail%, %tcp-dwnlk-pkts-ooo-fail%, %tcp-uplk-pkts-ooo-retr%, %tcp-
dwnlk-pkts-ooo-retr%, %icmp-flows%, %icmp-flows-cur%, %icmp-uplk-bytes%, %icmp-
dwnlk-bytes%, %icmp-uplk-pkts%, %icmp-dwnlk-pkts%, %icmp-ech-req%, %icmp-ech-
rep%, %icmp-dst-unrch%, %icmp-redir%, %icmp-tm-excd%, %icmp-trace-route%, %icmp-
oth%, %http-flows%, %http-flows-cur%, %http-uplk-bytes%, %http-dwnlk-bytes%, %http-
uplk-pkts%, %http-dwnlk-pkts%, %http-uplk-bytes-retr%, %http-dwnlk-bytes-
retr%, %http-uplk-pkts-retr%, %http-dwnlk-pkts-retr%, %http-req-succ%, %http-req-
fail%, %http-get-req%, %http-post-req%, %http-connect-req%, %http-inv-pkts%, %https-
flows%, %https-flows-cur%, %https-uplk-bytes%, %https-dwnlk-bytes%, %https-uplk-
pkts%, %https-dwnlk-pkts%, %https-uplk-bytes-retr%, %https-dwnlk-bytes-
retr%, %https-uplk-pkts-retr%, %https-dwnlk-pkts-retr%, %wtp-trans%, %wtp-cl-
zero%, %wtp-cl-one%, %wtp-cl-two%, %wtp-uplk-bytes%, %wtp-dwnlk-bytes%, %wtp-uplk-
pkts%, %wtp-dwnlk-pkts%, %wtp-uplk-bytes-retr%, %wtp-dwnlk-bytes-retr%, %wtp-uplk-
pkts-retr%, %wtp-dwnlk-pkts-retr%, %wtp-inv-pkts%, %wtp-inv-tcl-zero%, %wtp-inv-
tcl-one%, %wtp-inv-tcl-two%, %wtp-inv-tid-new%, %wtp-rslt-pkts%, %wtp-ack-to-
resp%, %wtp-ack-to-init%, %wtp-abrt-to-resp%, %wtp-abrt-to-init%, %wtp-seg-
invk%, %wtp-seg-rslt%, %wtp-neg-ack%, %wtp-tid-vrf%, %wtp-noninit-invk%, %wtp-unk-
pdu%, %wsp-flows%, %wsp-flows-cur%, %wsp-co-conn%, %wsp-cl-conn%, %wsp-uplk-
bytes%, %wsp-dwnlk-bytes%, %wsp-uplk-pkts%, %wsp-dwnlk-pkts%, %wsp-uplk-bytes-
retr%, %wsp-dwnlk-bytes-retr%, %wsp-uplk-pkts-retr%, %wsp-dwnlk-pkts-retr%, %wsp-co-
req-succ%, %wsp-co-req-fail%, %wsp-cl-req-succ%, %wsp-cl-req-fail%, %wsp-conn-
pdu%, %wsp-conn-rep%, %wsp-redir%, %wsp-disc%, %wsp-susp%, %wsp-resm%, %wsp-opt%, %wsp-
```

```

head%,%wsp-del%,%wsp-trace%,%wsp-reply%,%wsp-put%,%wsp-get%,%wsp-push%,%wsp-
conf-push%,%wsp-post%,%wsp-data-frag%,%wsp-rsrvd%,%wsp-inv-pkts%,%mms-
send%,%mms-send-succ%,%mms-send-fail%,%mms-retrv%,%mms-retrv-succ%,%mms-retrv-
fail%,%mms-uplk-bytes%,%mms-dwnlk-bytes%,%mms-uplk-pkts%,%mms-dwnlk-pkts%,%mms-
uplk-bytes-retr%,%mms-dwnlk-bytes-retr%,%mms-uplk-pkts-retr%,%mms-dwnlk-pkts-
retr%,%mms-snd-req%,%mms-snd-conf%,%mms-ntf-ind%,%mms-ntf-ind-imm%,%mms-ntf-ind-
del%,%mms-ntf-rsp%,%mms-retrv-conf%,%mms-ack-ind%,%mms-delvry-ind%,%mms-unk-
pdu%,%mms-inv-pkts%,%sip-flows%,%sip-flows-cur%,%sip-calls%,%sip-uplk-
bytes%,%sip-dwnlk-bytes%,%sip-uplk-pkts%,%sip-dwnlk-pkts%,%sip-uplk-bytes-
retr%,%sip-dwnlk-bytes-retr%,%sip-uplk-pkts-retr%,%sip-dwnlk-pkts-retr%,%sip-
invite%,%sip-bye%,%sip-ack%,%sip-cancel%,%sip-register%,%sip-inv-pkts%,%rtsp-
flows%,%rtsp-flows-cur%,%rtsp-sess%,%rtsp-uplk-bytes%,%rtsp-dwnlk-bytes%,%rtsp-
uplk-pkts%,%rtsp-dwnlk-pkts%,%rtsp-uplk-bytes-retr%,%rtsp-dwnlk-bytes-
retr%,%rtsp-uplk-pkts-retr%,%rtsp-dwnlk-pkts-retr%,%rtsp-play%,%rtsp-
setup%,%rtsp-pause%,%rtsp-record%,%rtsp-option%,%rtsp-redir%,%rtsp-desc%,%rtsp-
announ%,%rtsp-trdwn%,%rtsp-get-param%,%rtsp-set-param%,%rtsp-inv-pkts%

```

```

ecs schema ecsSch2 format EMS,ECS2,%date%,%time%,%rtp-
flows%,%rtp-flows-cur%,%rtp-uplk-bytes%,%rtp-dwnlk-bytes%,%rtp-uplk-pkts%,%rtp-
dwnlk-pkts%,%ftp-flows%,%ftp-flows-cur%,%ftp-uplk-bytes%,%ftp-dwnlk-bytes%,%ftp-
uplk-pkts%,%ftp-dwnlk-pkts%,%ftp-retr%,%ftp-stor%,%ftp-inv-pkts%,%smtp-
flows%,%smtp-flows-cur%,%smtp-uplk-bytes%,%smtp-dwnlk-bytes%,%smtp-uplk-
pkts%,%smtp-dwnlk-pkts%,%smtp-uplk-bytes-retr%,%smtp-dwnlk-bytes-retr%,%smtp-
uplk-pkts-retr%,%smtp-dwnlk-pkts-retr%,%smtp-unk-cmd%,%smtp-unk-rsp%,%smtp-req-
succ%,%smtp-req-fail%,%smtp-helo%,%smtp-ehlo%,%smtp-mail-frm%,%smtp-rcpt-
to%,%smtp-data%,%smtp-bdat%,%smtp-vrfy%,%smtp-expn%,%smtp-noop%,%smtp-
rset%,%smtp-quit%,%smtp-inv-pkts%,%pop3-flows%,%pop3-flows-cur%,%pop3-uplk-
bytes%,%pop3-dwnlk-bytes%,%pop3-uplk-pkts%,%pop3-dwnlk-pkts%,%pop3-uplk-bytes-
retr%,%pop3-dwnlk-bytes-retr%,%pop3-uplk-pkts-retr%,%pop3-dwnlk-pkts-
retr%,%pop3-retr%,%pop3-retr-succ%,%pop3-list%,%pop3-list-succ%,%pop3-inv-
pkts%,%imap-uplk-bytes%,%imap-dwnlk-bytes%,%imap-uplk-pkts%,%imap-dwnlk-
pkts%,%imap-uplk-bytes-retr%,%imap-dwnlk-bytes-retr%,%imap-uplk-pkts-
retr%,%imap-dwnlk-pkts-retr%,%imap-req-succ%,%imap-req-fail%,%imap-reply-
untag%,%imap-reply-commcont%,%imap-unk-command%,%imap-unk-reply%,%p2p-
flows%,%p2p-flows-cur%,%p2p-skype-uplnk-bytes%,%p2p-skype-dwnlk-bytes%,%p2p-
skype-uplnk-pkts%,%p2p-skype-dwnlk-pkts%,%p2p-bittorrent-uplnk-bytes%,%p2p-
bittorrent-dwnlk-bytes%,%p2p-bittorrent-uplnk-pkts%,%p2p-bittorrent-dwnlk-
pkts%,%p2p-edonkey-uplnk-bytes%,%p2p-edonkey-dwnlk-bytes%,%p2p-edonkey-uplnk-
pkts%,%p2p-edonkey-dwnlk-pkts%,%p2p-msn-uplnk-bytes%,%p2p-msn-dwnlk-bytes%,%p2p-
msn-uplnk-pkts%,%p2p-msn-dwnlk-pkts%,%p2p-yahoo-uplnk-bytes%,%p2p-yahoo-dwnlk-
bytes%,%p2p-yahoo-uplnk-pkts%,%p2p-yahoo-dwnlk-pkts%

```

```

ecs schema ecsSch3 format EMS,ECS3,%date%,%time%,%p2p-orb-uplnk-
bytes%,%p2p-orb-dwnlk-bytes%,%p2p-orb-uplnk-pkts%,%p2p-orb-dwnlk-pkts%,%p2p-
winny-uplnk-bytes%,%p2p-winny-dwnlk-bytes%,%p2p-winny-uplnk-pkts%,%p2p-winny-
dwnlk-pkts%,%p2p-slingbox-uplnk-bytes%,%p2p-slingbox-dwnlk-bytes%,%p2p-slingbox-
uplnk-pkts%,%p2p-slingbox-dwnlk-pkts%,%p2p-fasttrack-uplnk-bytes%,%p2p-
fasttrack-dwnlk-bytes%,%p2p-fasttrack-uplnk-pkts%,%p2p-fasttrack-dwnlk-
pkts%,%p2p-gnutella-uplnk-bytes%,%p2p-gnutella-dwnlk-bytes%,%p2p-gnutella-uplnk-
pkts%,%p2p-gnutella-dwnlk-pkts%,%p2p-jabber-uplnk-bytes%,%p2p-jabber-dwnlk-
bytes%,%p2p-jabber-uplnk-pkts%,%p2p-jabber-dwnlk-pkts%,%ecs-ttlsuccess%,%ecs-
ttlfail%,%ecs-curactive%,%ecs-15peak-curactive%,%ecs-ruleshit%,%ecs-

```

```

ttlalinkbytes%,%ecs-ttlulinkbytes%,%ecs-ttlalinkpackets%,%ecs-
ttlulinkpackets%,%ecs-ttlflowconn%,%ecs-ttlflowdisc%,%ecs-curflow%,%ecs-15peak-
curflow%,%ecs-15min-usage-flowall%,%dns-dwnlk-bytes%,%dns-dwnlk-pkts%,%dns-
flows%,%dns-flows-cur%,%dns-inv-pkts%,%dns-over-tcp-dwnlk-bytes%,%dns-over-tcp-
dwnlk-pkts%,%dns-over-tcp-uplk-bytes%,%dns-over-tcp-uplk-pkts%,%dns-req-a-
query%,%dns-req-cname-query%,%dns-req-ns-query%,%dns-req-ptr-query%,%dns-req-
unknown-query%,%dns-rsp-a-query%,%dns-rsp-cname-query%,%dns-rsp-ns-query%,%dns-
rsp-ptr-query%,%dns-rsp-unknown-query%,%dns-unk-opcode%,%dns-uplk-bytes%,%dns-
uplk-pkts%,%icmp-inv-pkts%,%p2p-applejuice-dwnlk-bytes%,%p2p-applejuice-dwnlk-
pkts%,%p2p-applejuice-uplnk-bytes%,%p2p-applejuice-uplnk-pkts%,%p2p-ares-dwnlk-
bytes%,%p2p-ares-dwnlk-pkts%,%p2p-ares-uplnk-bytes%,%p2p-ares-uplnk-pkts%,%p2p-
directconnect-dwnlk-bytes%,%p2p-directconnect-dwnlk-pkts%,%p2p-directconnect-
uplnk-bytes%,%p2p-directconnect-uplnk-pkts%,%p2p-feidian-dwnlk-bytes%,%p2p-
feidian-dwnlk-pkts%,%p2p-feidian-uplnk-bytes%,%p2p-feidian-uplnk-pkts%

```

```

ecs schema ecsSch4 format EMS,ECS4,%date%,%time%,%p2p-filetopia-
dwnlk-bytes%,%p2p-filetopia-dwnlk-pkts%,%p2p-filetopia-uplnk-bytes%,%p2p-
filetopia-uplnk-pkts%,%p2p-gadugadu-dwnlk-bytes%,%p2p-gadugadu-dwnlk-pkts%,%p2p-
gadugadu-uplnk-bytes%,%p2p-gadugadu-uplnk-pkts%,%p2p-imesh-dwnlk-bytes%,%p2p-
imesh-dwnlk-pkts%,%p2p-imesh-uplnk-bytes%,%p2p-imesh-uplnk-pkts%,%p2p-manolito-
dwnlk-bytes%,%p2p-manolito-dwnlk-pkts%,%p2p-manolito-uplnk-bytes%,%p2p-manolito-
uplnk-pkts%,%p2p-msn-non-voice-dwnlk-bytes%,%p2p-msn-non-voice-dwnlk-pkts%,%p2p-
msn-non-voice-uplnk-bytes%,%p2p-msn-non-voice-uplnk-pkts%,%p2p-msn-voice-dwnlk-
bytes%,%p2p-msn-voice-dwnlk-pkts%,%p2p-msn-voice-uplnk-bytes%,%p2p-msn-voice-
uplnk-pkts%,%p2p-mute-dwnlk-bytes%,%p2p-mute-dwnlk-pkts%,%p2p-mute-uplnk-
bytes%,%p2p-mute-uplnk-pkts%,%p2p-pando-dwnlk-bytes%,%p2p-pando-dwnlk-
pkts%,%p2p-pando-uplnk-bytes%,%p2p-pando-uplnk-pkts%,%p2p-pplive-dwnlk-
bytes%,%p2p-pplive-dwnlk-pkts%,%p2p-pplive-uplnk-bytes%,%p2p-pplive-uplnk-
pkts%,%p2p-ppstream-dwnlk-bytes%,%p2p-ppstream-dwnlk-pkts%,%p2p-ppstream-uplnk-
bytes%,%p2p-ppstream-uplnk-pkts%,%p2p-qg-dwnlk-bytes%,%p2p-qg-dwnlk-pkts%,%p2p-
qqlive-dwnlk-bytes%,%p2p-qqlive-dwnlk-pkts%,%p2p-qqlive-uplnk-bytes%,%p2p-
qqlive-uplnk-pkts%,%p2p-qg-uplnk-bytes%,%p2p-qg-uplnk-pkts%,%p2p-skinny-dwnlk-
bytes%,%p2p-skinny-dwnlk-pkts%,%p2p-skinny-uplnk-bytes%,%p2p-skinny-uplnk-
pkts%,%p2p-skype-non-voice-dwnlk-bytes%,%p2p-skype-non-voice-dwnlk-pkts%,%p2p-
skype-non-voice-uplnk-bytes%,%p2p-skype-non-voice-uplnk-pkts%,%p2p-skype-voice-
dwnlk-bytes%,%p2p-skype-voice-dwnlk-pkts%,%p2p-skype-voice-uplnk-bytes%,%p2p-
skype-voice-uplnk-pkts%,%p2p-sopcast-dwnlk-bytes%,%p2p-sopcast-dwnlk-pkts%,%p2p-
sopcast-uplnk-bytes%,%p2p-sopcast-uplnk-pkts%,%p2p-soulseek-dwnlk-bytes%,%p2p-
soulseek-dwnlk-pkts%,%p2p-soulseek-uplnk-bytes%

```

```

ecs schema ecsSch5 format EMS,ECS5,%date%,%time%,%p2p-soulseek-
uplnk-pkts%,%p2p-yahoo-non-voice-dwnlk-bytes%,%p2p-yahoo-non-voice-dwnlk-
pkts%,%p2p-yahoo-non-voice-uplnk-bytes%,%p2p-yahoo-non-voice-uplnk-pkts%,%p2p-
yahoo-voice-dwnlk-bytes%,%p2p-yahoo-voice-dwnlk-pkts%,%p2p-yahoo-voice-uplnk-
bytes%,%p2p-yahoo-voice-uplnk-pkts%,%p2p-zattoo-dwnlk-bytes%,%p2p-zattoo-dwnlk-
pkts%,%p2p-zattoo-uplnk-bytes%,%p2p-zattoo-uplnk-pkts%,%p2p-oscar-uplnk-
bytes%,%p2p-oscar-dwnlk-bytes%,%p2p-oscar-uplnk-pkts%,%p2p-oscar-dwnlk-
pkts%,%p2p-popo-uplnk-bytes%,%p2p-popo-dwnlk-bytes%,%p2p-popo-uplnk-pkts%,%p2p-
popo-dwnlk-pkts%,%p2p-irc-uplnk-bytes%,%p2p-irc-dwnlk-bytes%,%p2p-irc-uplnk-
pkts%,%p2p-irc-dwnlk-pkts%,%p2p-steam-uplnk-bytes%,%p2p-steam-dwnlk-bytes%,%p2p-
steam-uplnk-pkts%,%p2p-steam-dwnlk-pkts%,%p2p-ddlink-uplnk-bytes%,%p2p-ddlink-
dwnlk-bytes%,%p2p-ddlink-uplnk-pkts%,%p2p-ddlink-dwnlk-pkts%,%p2p-half-life2-

```

```
uplnk-bytes%, %p2p-halfllife2-dwlnk-bytes%, %p2p-halfllife2-uplnk-pkts%, %p2p-
halfllife2-dwlnk-pkts%, %p2p-hamachivpn-uplnk-bytes%, %p2p-hamachivpn-dwlnk-
bytes%, %p2p-hamachivpn-uplnk-pkts%, %p2p-hamachivpn-dwlnk-pkts%, %p2p-tvants-
uplnk-bytes%, %p2p-tvants-dwlnk-bytes%, %p2p-tvants-uplnk-pkts%, %p2p-tvants-dwlnk-
pkts%, %p2p-tvuplayer-uplnk-bytes%, %p2p-tvuplayer-dwlnk-bytes%, %p2p-tvuplayer-
uplnk-pkts%, %p2p-tvuplayer-dwlnk-pkts%, %p2p-uusee-uplnk-bytes%, %p2p-uusee-dwlnk-
bytes%, %p2p-uusee-uplnk-pkts%, %p2p-uusee-dwlnk-pkts%, %p2p-vpnx-uplnk-
bytes%, %p2p-vpnx-dwlnk-bytes%, %p2p-vpnx-uplnk-pkts%, %p2p-vpnx-dwlnk-pkts%, %p2p-
vtun-uplnk-bytes%, %p2p-vtun-dwlnk-bytes%, %p2p-vtun-uplnk-pkts%, %p2p-vtun-dwlnk-
pkts%, %p2p-winmx-uplnk-bytes%, %p2p-winmx-dwlnk-bytes%, %p2p-winmx-uplnk-
pkts%, %p2p-winmx-dwlnk-pkts%, %p2p-wofwarcraft-uplnk-bytes%, %p2p-wofwarcraft-
dwlnk-bytes%, %p2p-wofwarcraft-uplnk-pkts%, %p2p-wofwarcraft-dwlnk-pkts%
```

```
ecs schema ecsSch6 format EMS,ECS6,%date%,%time%,%p2p-xbox-uplnk-
bytes%, %p2p-xbox-dwlnk-bytes%, %p2p-xbox-uplnk-pkts%, %p2p-xbox-dwlnk-pkts%
```

```
ipsg schema ipsgSch1 format
EMS,IPSG,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%rad-
servaddr%,%rad-servport%,%total-start-req-rcv%,%total-interim-update-req-
rcv%,%total-stop-req-rcv%,%total-unknown-req-rcv%,%total-rsp-sent%,%total-start-
req-retrans-rcv%,%total-start-rsp-sent%,%total-discard-msgs-unknown-
clnt%,%total-discard-msgs-ignore-interim%,%total-discard-msgs-ignore-
stop%,%total-discard-msgs-incorrect-secret%,%total-discard-msgs-attr-missing%
```

```
asngw schema asngwSch1 format
EMS,ASNGW1,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6m-
spreattreq-totsent%,%r6mspreattreq-retranssent%,%r6mspreattreq-
totrec%,%r6mspreattreq-totacc%,%r6mspreattreq-totdenied%,%r6mspreattreq-
totdiscard%,%r6mspreattreq-badform%,%r6mspreattreq-decodeerr%,%r6mspreattreq-
unspecerr%,%r6mspreattreq-missmandtlv%,%r6mspreattreq-
tlvvalinval%,%r6mspreattreq-unknownntlv%,%r6mspreattreq-
duptlvfound%,%r6mspreattreq-nosessfound%,%r6mspreattreq-
transiderr%,%r6mspreattrsp-totsent%,%r6mspreattrsp-retranssent%,%r6mspreattrsp-
totrec%,%r6mspreattrsp-totacc%,%r6mspreattrsp-totdenied%,%r6mspreattrsp-
totdiscard%,%r6mspreattrsp-badform%,%r6mspreattrsp-decodeerr%,%r6mspreattrsp-
unspecerr%,%r6mspreattrsp-missmandtlv%,%r6mspreattrsp-
tlvvalinval%,%r6mspreattrsp-unknownntlv%,%r6mspreattrsp-
duptlvfound%,%r6mspreattrsp-nosessfound%,%r6mspreattrsp-
transiderr%,%r6mspreattack-totsent%,%r6mspreattack-retranssent%,%r6mspreattack-
totrec%,%r6mspreattack-totacc%,%r6mspreattack-totdenied%,%r6mspreattack-
totdiscard%,%r6mspreattack-badform%,%r6mspreattack-decodeerr%,%r6mspreattack-
unspecerr%,%r6mspreattack-missmandtlv%,%r6mspreattack-
tlvvalinval%,%r6mspreattack-unknownntlv%,%r6mspreattack-
duptlvfound%,%r6mspreattack-nosessfound%,%r6mspreattack-
transiderr%,%r6contextreq-totsent%,%r6contextreq-retranssent%,%r6contextreq-
totrec%,%r6contextreq-totacc%,%r6contextreq-totdenied%,%r6contextreq-
totdiscard%,%r6contextreq-badform%,%r6contextreq-decodeerr%,%r6contextreq-
unspecerr%,%r6contextreq-missmandtlv%,%r6contextreq-tlvvalinval%,%r6contextreq-
unknownntlv%,%r6contextreq-duptlvfound%,%r6contextreq-nosessfound%,%r6contextreq-
transiderr%,%r6contextrepo-totsent%,%r6contextrepo-retranssent%,%r6contextrepo-
totrec%,%r6contextrepo-totacc%,%r6contextrepo-totdenied%,%r6contextrepo-
totdiscard%
```

```

asngw schema asngwSch2 format
EMS, ASNGW2, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %peeripaddr%, %r6c
ontextrepo-badform%, %r6contextrepo-decodeerr%, %r6contextrepo-
unspecerr%, %r6contextrepo-missmandtlv%, %r6contextrepo-
tlvvalinval%, %r6contextrepo-unknownntlv%, %r6contextrepo-
duptlvfound%, %r6contextrepo-nosessfound%, %r6contextrepo-
transiderr%, %r6contextack-totsent%, %r6contextack-retranssent%, %r6contextack-
totrec%, %r6contextack-totacc%, %r6contextack-totdenied%, %r6contextack-
totdiscard%, %r6contextack-badform%, %r6contextack-decodeerr%, %r6contextack-
unspecerr%, %r6contextack-missmandtlv%, %r6contextack-tlvvalinval%, %r6contextack-
unknownntlv%, %r6contextack-duptlvfound%, %r6contextack-nosessfound%, %r6contextack-
transiderr%, %r6autheaptra-totsent%, %r6autheaptra-retranssent%, %r6autheaptra-
totrec%, %r6autheaptra-totacc%, %r6autheaptra-totdenied%, %r6autheaptra-
totdiscard%, %r6autheaptra-badform%, %r6autheaptra-decodeerr%, %r6autheaptra-
unspecerr%, %r6autheaptra-missmandtlv%, %r6autheaptra-tlvvalinval%, %r6autheaptra-
unknownntlv%, %r6autheaptra-duptlvfound%, %r6autheaptra-nosessfound%, %r6autheaptra-
transiderr%, %r6autheaptra-outofordrccd%, %r6autheapsta-totrec%, %r6autheapsta-
totacc%, %r6autheapsta-totdenied%, %r6autheapsta-totdiscard%, %r6autheapsta-
badform%, %r6autheapsta-decodeerr%, %r6autheapsta-unspecerr%, %r6autheapsta-
missmandtlv%, %r6autheapsta-tlvvalinval%, %r6autheapsta-unknownntlv%, %r6autheapsta-
duptlvfound%, %r6autheapsta-nosessfound%, %r6autheapsta-transiderr%, %r6autheapsta-
outofordrccd%, %r6autheapsta-noresourcedrop%, %r6autheapsta-
bsinireauth%, %r6msattreq-totsent%, %r6msattreq-retranssent%, %r6msattreq-
totrec%, %r6msattreq-totacc%, %r6msattreq-totdenied%, %r6msattreq-
totdiscard%, %r6msattreq-badform%, %r6msattreq-decodeerr%, %r6msattreq-
unspecerr%, %r6msattreq-missmandtlv%, %r6msattreq-tlvvalinval%, %r6msattreq-
unknownntlv%

```

```

asngw schema asngwSch3 format
EMS, ASNGW3, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %peeripaddr%, %r6m
sattreq-duptlvfound%, %r6msattreq-nosessfound%, %r6msattreq-
transiderr%, %r6msattrsp-totsent%, %r6msattrsp-retranssent%, %r6msattrsp-
totrec%, %r6msattrsp-totacc%, %r6msattrsp-totdenied%, %r6msattrsp-
totdiscard%, %r6msattrsp-badform%, %r6msattrsp-decodeerr%, %r6msattrsp-
unspecerr%, %r6msattrsp-missmandtlv%, %r6msattrsp-tlvvalinval%, %r6msattrsp-
unknownntlv%, %r6msattrsp-duptlvfound%, %r6msattrsp-nosessfound%, %r6msattrsp-
transiderr%, %r6msattack-totsent%, %r6msattack-retranssent%, %r6msattack-
totrec%, %r6msattack-totacc%, %r6msattack-totdenied%, %r6msattack-
totdiscard%, %r6msattack-badform%, %r6msattack-decodeerr%, %r6msattack-
unspecerr%, %r6msattack-missmandtlv%, %r6msattack-tlvvalinval%, %r6msattack-
unknownntlv%, %r6msattack-duptlvfound%, %r6msattack-nosessfound%, %r6msattack-
transiderr%, %r6datapathregreq-totsent%, %r6datapathregreq-
retranssent%, %r6datapathregreq-totrec%, %r6datapathregreq-
totacc%, %r6datapathregreq-totdenied%, %r6datapathregreq-
totdiscard%, %r6datapathregreq-badform%, %r6datapathregreq-
decodeerr%, %r6datapathregreq-unspecerr%, %r6datapathregreq-
missmandtlv%, %r6datapathregreq-tlvvalinval%, %r6datapathregreq-
unknownntlv%, %r6datapathregreq-duptlvfound%, %r6datapathregreq-
nosessfound%, %r6datapathregreq-transiderr%, %r6datapathregrsp-
totsent%, %r6datapathregrsp-retranssent%, %r6datapathregrsp-
totrec%, %r6datapathregrsp-totacc%, %r6datapathregrsp-
totdenied%, %r6datapathregrsp-totdiscard%, %r6datapathregrsp-

```

```
badform%,%r6datapathregrsp-decodeerr%,%r6datapathregrsp-
unspecerr%,%r6datapathregrsp-missmandtlv%,%r6datapathregrsp-
tlvvalinval%,%r6datapathregrsp-unknownntlv%,%r6datapathregrsp-
duptlvfound%,%r6datapathregrsp-nosessfound%,%r6datapathregrsp-
transiderr%,%r6datapathregack-totsent%
```

asngw schema asngwSch4 format

```
EMS,ASNGW4,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6d
atapathregack-retranssent%,%r6datapathregack-totrec%,%r6datapathregack-
totacc%,%r6datapathregack-totdenied%,%r6datapathregack-
totdiscard%,%r6datapathregack-badform%,%r6datapathregack-
decodeerr%,%r6datapathregack-unspecerr%,%r6datapathregack-
missmandtlv%,%r6datapathregack-tlvvalinval%,%r6datapathregack-
unknownntlv%,%r6datapathregack-duptlvfound%,%r6datapathregack-
nosessfound%,%r6datapathregack-transiderr%,%r6datapathderegreq-
totsent%,%r6datapathderegreq-retranssent%,%r6datapathderegreq-
totrec%,%r6datapathderegreq-totacc%,%r6datapathderegreq-
totdenied%,%r6datapathderegreq-totdiscard%,%r6datapathderegreq-
badform%,%r6datapathderegreq-decodeerr%,%r6datapathderegreq-
unspecerr%,%r6datapathderegreq-missmandtlv%,%r6datapathderegreq-
tlvvalinval%,%r6datapathderegreq-unknownntlv%,%r6datapathderegreq-
duptlvfound%,%r6datapathderegreq-nosessfound%,%r6datapathderegreq-
transiderr%,%r6datapathderegreq-totsent%,%r6datapathderegreq-
retranssent%,%r6datapathderegreq-totrec%,%r6datapathderegreq-
totacc%,%r6datapathderegreq-totdenied%,%r6datapathderegreq-
totdiscard%,%r6datapathderegreq-badform%,%r6datapathderegreq-
decodeerr%,%r6datapathderegreq-unspecerr%,%r6datapathderegreq-
missmandtlv%,%r6datapathderegreq-tlvvalinval%,%r6datapathderegreq-
unknownntlv%,%r6datapathderegreq-duptlvfound%,%r6datapathderegreq-
nosessfound%,%r6datapathderegreq-transiderr%,%r6keychadir-totsent%,%r6keychadir-
retranssent%,%r6keychadir-totrec%,%r6keychadir-totacc%,%r6keychadir-
totdenied%,%r6keychadir-totdiscard%,%r6keychadir-badform%,%r6keychadir-
decodeerr%,%r6keychadir-unspecerr%,%r6keychadir-missmandtlv%,%r6keychadir-
tlvvalinval%,%r6keychadir-unknownntlv%,%r6keychadir-duptlvfound%,%r6keychadir-
nosessfound%,%r6keychadir-transiderr%
```

asngw schema asngwSch5 format

```
EMS,ASNGW5,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6k
eychaack-totsent%,%r6keychaack-retranssent%,%r6keychaack-totrec%,%r6keychaack-
totacc%,%r6keychaack-totdenied%,%r6keychaack-totdiscard%,%r6keychaack-
badform%,%r6keychaack-decodeerr%,%r6keychaack-unspecerr%,%r6keychaack-
missmandtlv%,%r6keychaack-tlvvalinval%,%r6keychaack-unknownntlv%,%r6keychaack-
duptlvfound%,%r6keychaack-nosessfound%,%r6keychaack-transiderr%,%r6unknown-
totrec%,%r6unknown-totacc%,%r6unknown-totdenied%,%r6unknown-
totdiscard%,%r6unknown-badform%,%r6unknown-decodeerr%,%r6unknown-
unspecerr%,%r6unknown-missmandtlv%,%r6unknown-tlvvalinval%,%r6unknown-
unknownntlv%,%r6unknown-duptlvfound%,%r6unknown-nosessfound%,%r6unknown-
transiderr%,%r6datagrerec-totpackrec%,%r6datagrerec-
prottyperror%,%r6datagrerec-totbytrec%,%r6datagrerec-grekeyabs%,%r6datagrerec-
grechkerr%,%r6datagrerec-invpacklen%,%r6datagrerec-nosessfou%,%r6datagrerec-
unspecerr%,%r6datagresend-totpacksent%,%r6datagresend-senderr%,%r6datagresend-
totbytssent%,%r6datagresend-unspeerr%,%r4anchorpcack-adminprohib%,%r4anchorpcack-
```

```
badform%,%r4anchorpcack-decodeerr%,%r4anchorpcack-duptlvfound%,%r4anchorpcack-
missmandtlv%,%r4anchorpcack-noresourcedrop%,%r4anchorpcack-
nosessfound%,%r4anchorpcack-retranssent%,%r4anchorpcack-
tlvvalinval%,%r4anchorpcack-totacc%,%r4anchorpcack-totdenied%,%r4anchorpcack-
totdiscard%,%r4anchorpcack-totrec%,%r4anchorpcack-totrelay%,%r4anchorpcack-
totsendfail%,%r4anchorpcack-totsent%,%r4anchorpcack-transiderr%,%r4anchorpcack-
unknowntlv%,%r4anchorpcack-unspecerr%,%r4anchorpcind-
adminprohib%,%r4anchorpcind-badform%,%r4anchorpcind-decodeerr%,%r4anchorpcind-
duptlvfound%,%r4anchorpcind-missmandtlv%,%r4anchorpcind-
noresourcedrop%,%r4anchorpcind-nosessfound%
```

asngw schema asngwSch6 format

```
EMS,ASNGW6,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r4a
nchorpcind-retranssent%,%r4anchorpcind-tlvvalinval%,%r4anchorpcind-
totacc%,%r4anchorpcind-totdenied%,%r4anchorpcind-totdiscard%,%r4anchorpcind-
totrec%,%r4anchorpcind-totrelay%,%r4anchorpcind-totsendfail%,%r4anchorpcind-
totsent%,%r4anchorpcind-transiderr%,%r4anchorpcind-unknowntlv%,%r4anchorpcind-
unspecerr%,%r4autheapsta-adminprohib%,%r4autheapsta-badform%,%r4autheapsta-
decodeerr%,%r4autheapsta-duptlvfound%,%r4autheapsta-missmandtlv%,%r4autheapsta-
noresourcedrop%,%r4autheapsta-nosessfound%,%r4autheapsta-
tlvvalinval%,%r4autheapsta-totacc%,%r4autheapsta-totdenied%,%r4autheapsta-
totdiscard%,%r4autheapsta-totrec%,%r4autheapsta-totrelay%,%r4autheapsta-
transiderr%,%r4autheapsta-unknowntlv%,%r4autheapsta-unspecerr%,%r4autheaptra-
adminprohib%,%r4autheaptra-badform%,%r4autheaptra-decodeerr%,%r4autheaptra-
duptlvfound%,%r4autheaptra-missmandtlv%,%r4autheaptra-
noresourcedrop%,%r4autheaptra-nosessfound%,%r4autheaptra-
retranssent%,%r4autheaptra-tlvvalinval%,%r4autheaptra-totacc%,%r4autheaptra-
totdenied%,%r4autheaptra-totdiscard%,%r4autheaptra-totrec%,%r4autheaptra-
totrelay%,%r4autheaptra-totsendfail%,%r4autheaptra-totsent%,%r4autheaptra-
transiderr%,%r4autheaptra-unknowntlv%,%r4autheaptra-
unspecerr%,%r4cmackeycounack-adminprohib%,%r4cmackeycounack-
badform%,%r4cmackeycounack-decodeerr%,%r4cmackeycounack-
duptlvfound%,%r4cmackeycounack-missmandtlv%,%r4cmackeycounack-
noresourcedrop%,%r4cmackeycounack-nosessfound%,%r4cmackeycounack-retranssent%
```

asngw schema asngwSch7 format

```
EMS,ASNGW7,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r4c
mackeycounack-tlvvalinval%,%r4cmackeycounack-totacc%,%r4cmackeycounack-
totdenied%,%r4cmackeycounack-totdiscard%,%r4cmackeycounack-
totrec%,%r4cmackeycounack-totrelay%,%r4cmackeycounack-
totsendfail%,%r4cmackeycounack-totsent%,%r4cmackeycounack-
transiderr%,%r4cmackeycounack-unknowntlv%,%r4cmackeycounack-
unspecerr%,%r4cmackeycounupd-adminprohib%,%r4cmackeycounupd-
badform%,%r4cmackeycounupd-decodeerr%,%r4cmackeycounupd-
duptlvfound%,%r4cmackeycounupd-missmandtlv%,%r4cmackeycounupd-
noresourcedrop%,%r4cmackeycounupd-nosessfound%,%r4cmackeycounupd-
retranssent%,%r4cmackeycounupd-tlvvalinval%,%r4cmackeycounupd-
totacc%,%r4cmackeycounupd-totdenied%,%r4cmackeycounupd-
totdiscard%,%r4cmackeycounupd-totrec%,%r4cmackeycounupd-
totrelay%,%r4cmackeycounupd-totsendfail%,%r4cmackeycounupd-
totsent%,%r4cmackeycounupd-transiderr%,%r4cmackeycounupd-
unknowntlv%,%r4cmackeycounupd-unspecerr%,%r4contextack-
```

```
adminprohib%,%r4contextack-badform%,%r4contextack-decodeerr%,%r4contextack-
duptlvfound%,%r4contextack-missmandtlv%,%r4contextack-
noresourcedrop%,%r4contextack-nosessfound%,%r4contextack-
retranssent%,%r4contextack-tlvvalinval%,%r4contextack-totacc%,%r4contextack-
totdenied%,%r4contextack-totdiscard%,%r4contextack-totrec%,%r4contextack-
totrelay%,%r4contextack-totsendfail%,%r4contextack-totsent%,%r4contextack-
transiderr%,%r4contextack-unknownntlv%,%r4contextack-unspecerr%,%r4contextrepo-
adminprohib%,%r4contextrepo-badform%,%r4contextrepo-decodeerr%
```

asngw schema asngwSch8 format

```
EMS,ASNGW8,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r4c
ontextrepo-duptlvfound%,%r4contextrepo-missmandtlv%,%r4contextrepo-
noresourcedrop%,%r4contextrepo-nosessfound%,%r4contextrepo-
retranssent%,%r4contextrepo-tlvvalinval%,%r4contextrepo-totacc%,%r4contextrepo-
totdenied%,%r4contextrepo-totdiscard%,%r4contextrepo-totrec%,%r4contextrepo-
totrelay%,%r4contextrepo-totsendfail%,%r4contextrepo-totsent%,%r4contextrepo-
transiderr%,%r4contextrepo-unknownntlv%,%r4contextrepo-unspecerr%,%r4contextreq-
adminprohib%,%r4contextreq-badform%,%r4contextreq-decodeerr%,%r4contextreq-
duptlvfound%,%r4contextreq-missmandtlv%,%r4contextreq-
noresourcedrop%,%r4contextreq-nosessfound%,%r4contextreq-
retranssent%,%r4contextreq-tlvvalinval%,%r4contextreq-totacc%,%r4contextreq-
totdenied%,%r4contextreq-totdiscard%,%r4contextreq-totrec%,%r4contextreq-
totrelay%,%r4contextreq-totsendfail%,%r4contextreq-totsent%,%r4contextreq-
transiderr%,%r4contextreq-unknownntlv%,%r4contextreq-unspecerr%,%r4datagrerec-
grechkerr%,%r4datagrerec-grekeyabs%,%r4datagrerec-invpacklen%,%r4datagrerec-
nosessfou%,%r4datagrerec-protyperrror%,%r4datagrerec-totbytrec%,%r4datagrerec-
totpackrec%,%r4datagrerec-unspecerr%,%r4datagresend-senderr%,%r4datagresend-
totbytstent%,%r4datagresend-totpacksent%,%r4datagresend-
unspeerr%,%r4datapathderegack-admprohibit%,%r4datapathderegack-
badform%,%r4datapathderegack-decodeerr%,%r4datapathderegack-
duptlvfound%,%r4datapathderegack-missmandtlv%,%r4datapathderegack-
noresourcedrop%,%r4datapathderegack-nosessfound%
```

asngw schema asngwSch9 format

```
EMS,ASNGW9,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r4d
atapathderegack-retranssent%,%r4datapathderegack-
tlvvalinval%,%r4datapathderegack-totacc%,%r4datapathderegack-
totdenied%,%r4datapathderegack-totdiscard%,%r4datapathderegack-
totrec%,%r4datapathderegack-totrelay%,%r4datapathderegack-
totsendfail%,%r4datapathderegack-totsent%,%r4datapathderegack-
transiderr%,%r4datapathderegack-unknownntlv%,%r4datapathderegack-
unspecerr%,%r4datapathderegreseq-adminprohib%,%r4datapathderegreseq-
badform%,%r4datapathderegreseq-decodeerr%,%r4datapathderegreseq-
duptlvfound%,%r4datapathderegreseq-missmandtlv%,%r4datapathderegreseq-
noresourcedrop%,%r4datapathderegreseq-nosessfound%,%r4datapathderegreseq-
retranssent%,%r4datapathderegreseq-tlvvalinval%,%r4datapathderegreseq-
totacc%,%r4datapathderegreseq-totdenied%,%r4datapathderegreseq-
totdiscard%,%r4datapathderegreseq-totrec%,%r4datapathderegreseq-
totrelay%,%r4datapathderegreseq-totsendfail%,%r4datapathderegreseq-
totsent%,%r4datapathderegreseq-transiderr%,%r4datapathderegreseq-
unknownntlv%,%r4datapathderegreseq-unspecerr%,%r4datapathderegrsp-
adminprohib%,%r4datapathderegrsp-badform%,%r4datapathderegrsp-
```

```

decodeerr%,%r4datapathderegrsp-duptlvfound%,%r4datapathderegrsp-
missmandtlv%,%r4datapathderegrsp-noresourcedrop%,%r4datapathderegrsp-
nosessfound%,%r4datapathderegrsp-retranssent%,%r4datapathderegrsp-
tlvvalinval%,%r4datapathderegrsp-totacc%,%r4datapathderegrsp-
totdenied%,%r4datapathderegrsp-totdiscard%,%r4datapathderegrsp-
totrec%,%r4datapathderegrsp-totrelay%,%r4datapathderegrsp-totsendfail%

```

asngw schema asngwSchA format

```

EMS,ASNGWA,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r4d
atapathderegrsp-totsent%,%r4datapathderegrsp-transiderr%,%r4datapathderegrsp-
unknowntlv%,%r4datapathderegrsp-unspecerr%,%r4datapathpreregack-
adminprohib%,%r4datapathpreregack-badform%,%r4datapathpreregack-
decodeerr%,%r4datapathpreregack-duptlvfound%,%r4datapathpreregack-
missmandtlv%,%r4datapathpreregack-noresourcedrop%,%r4datapathpreregack-
nosessfound%,%r4datapathpreregack-retranssent%,%r4datapathpreregack-
tlvvalinval%,%r4datapathpreregack-totacc%,%r4datapathpreregack-
totdenied%,%r4datapathpreregack-totdiscard%,%r4datapathpreregack-
totrec%,%r4datapathpreregack-totrelay%,%r4datapathpreregack-
totsendfail%,%r4datapathpreregack-totsent%,%r4datapathpreregack-
transiderr%,%r4datapathpreregack-unknowntlv%,%r4datapathpreregack-
unspecerr%,%r4datapathpreregack-adminprohib%,%r4datapathpreregack-
badform%,%r4datapathpreregack-decodeerr%,%r4datapathpreregack-
duptlvfound%,%r4datapathpreregack-missmandtlv%,%r4datapathpreregack-
noresourcedrop%,%r4datapathpreregack-nosessfound%,%r4datapathpreregack-
retranssent%,%r4datapathpreregack-tlvvalinval%,%r4datapathpreregack-
totacc%,%r4datapathpreregack-totdenied%,%r4datapathpreregack-
totdiscard%,%r4datapathpreregack-totrec%,%r4datapathpreregack-
totrelay%,%r4datapathpreregack-totsendfail%,%r4datapathpreregack-
totsent%,%r4datapathpreregack-transiderr%,%r4datapathpreregack-
unknowntlv%,%r4datapathpreregack-unspecerr%,%r4datapathpreregack-
adminprohib%,%r4datapathpreregack-badform%,%r4datapathpreregack-decodeerr%

```

asngw schema asngwSchB format

```

EMS,ASNGWB,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r4d
atapathpreregrsp-duptlvfound%,%r4datapathpreregrsp-
missmandtlv%,%r4datapathpreregrsp-noresourcedrop%,%r4datapathpreregrsp-
nosessfound%,%r4datapathpreregrsp-retranssent%,%r4datapathpreregrsp-
tlvvalinval%,%r4datapathpreregrsp-totacc%,%r4datapathpreregrsp-
totdenied%,%r4datapathpreregrsp-totdiscard%,%r4datapathpreregrsp-
totrec%,%r4datapathpreregrsp-totrelay%,%r4datapathpreregrsp-
totsendfail%,%r4datapathpreregrsp-totsent%,%r4datapathpreregrsp-
transiderr%,%r4datapathpreregrsp-unknowntlv%,%r4datapathpreregrsp-
unspecerr%,%r4datapathregack-adminprohib%,%r4datapathregack-
badform%,%r4datapathregack-decodeerr%,%r4datapathregack-
duptlvfound%,%r4datapathregack-missmandtlv%,%r4datapathregack-
noresourcedrop%,%r4datapathregack-nosessfound%,%r4datapathregack-
retranssent%,%r4datapathregack-tlvvalinval%,%r4datapathregack-
totacc%,%r4datapathregack-totdenied%,%r4datapathregack-
totdiscard%,%r4datapathregack-totrec%,%r4datapathregack-
totrelay%,%r4datapathregack-totsendfail%,%r4datapathregack-
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```

```
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missmandtlv%,%r4datapathregreq-noresourcedrop%,%r4datapathregreq-
nosessfound%,%r4datapathregreq-retranssent%,%r4datapathregreq-
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asngw schema asngwSchC format

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asngw schema asngwSchD format

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asngw schema asngwSchE format

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asngw schema asngwSchF format

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```

```

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```

asngw schema asngwSchG format

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```

asngw schema asngwSchH format

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```

```
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```

asngw schema asngwSchI format

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asngw schema asngwSchJ format

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asngw schema asngwSchK format

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```

asngw schema asngwSchL format

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asngw schema asngwSchM format

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EMS,ASNGWM,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6d
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totdiscard%,%r6datapathderegack-totrec%,%r6datapathderegack-
totrelay%,%r6datapathderegack-totsendfail%,%r6datapathderegack-
totsent%,%r6datapathderegack-transiderr%,%r6datapathderegack-
unknowntlv%,%r6datapathderegack-unspecerr%,%r6datapathderegre-
adminprohib%,%r6datapathderegre-noresourcedrop%,%r6datapathderegre-
totrelay%,%r6datapathderegre-totsendfail%,%r6datapathderegrsp-
adminprohib%,%r6datapathderegrsp-noresourcedrop%,%r6datapathderegrsp-
totrelay%,%r6datapathderegrsp-totsendfail%,%r6datapathpreregack-
adminprohib%,%r6datapathpreregack-badform%,%r6datapathpreregack-
decodeerr%,%r6datapathpreregack-duptlvfound%,%r6datapathpreregack-
missmandtlv%,%r6datapathpreregack-noresourcedrop%,%r6datapathpreregack-
nosessfound%,%r6datapathpreregack-retranssent%,%r6datapathpreregack-
tlvvalinval%,%r6datapathpreregack-totacc%,%r6datapathpreregack-
totdenied%,%r6datapathpreregack-totdiscard%,%r6datapathpreregack-
totrec%,%r6datapathpreregack-totrelay%,%r6datapathpreregack-
totsendfail%,%r6datapathpreregack-totsent%,%r6datapathpreregack-
transiderr%,%r6datapathpreregack-unknowntlv%,%r6datapathpreregack-
unspecerr%,%r6datapathpreregack-adminprohib%,%r6datapathpreregack-
badform%,%r6datapathpreregack-congestion%,%r6datapathpreregack-
decodeerr%,%r6datapathpreregack-duptlvfound%,%r6datapathpreregack-
missmandtlv%,%r6datapathpreregack-noresourcedrop%,%r6datapathpreregack-
nosessfound%
```

asngw schema asngwSchN format

```
EMS,ASNGWN,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6d
atapathpreregack-retranssent%,%r6datapathpreregack-
tlvvalinval%,%r6datapathpreregack-totacc%,%r6datapathpreregack-
totdenied%,%r6datapathpreregack-totdiscard%,%r6datapathpreregack-
totrec%,%r6datapathpreregack-totrelay%,%r6datapathpreregack-
totsendfail%,%r6datapathpreregack-totsent%,%r6datapathpreregack-
transiderr%,%r6datapathpreregack-unknowntlv%,%r6datapathpreregack-
unspecerr%,%r6datapathpreregack-adminprohib%,%r6datapathpreregack-
badform%,%r6datapathpreregack-decodeerr%,%r6datapathpreregack-
duptlvfound%,%r6datapathpreregack-missmandtlv%,%r6datapathpreregack-
noresourcedrop%,%r6datapathpreregack-nosessfound%,%r6datapathpreregack-
retranssent%,%r6datapathpreregack-tlvvalinval%,%r6datapathpreregack-
totacc%,%r6datapathpreregack-totdenied%,%r6datapathpreregack-
totdiscard%,%r6datapathpreregack-totrec%,%r6datapathpreregack-
totrelay%,%r6datapathpreregack-totsendfail%,%r6datapathpreregack-
totsent%,%r6datapathpreregack-transiderr%,%r6datapathpreregack-
unknowntlv%,%r6datapathpreregack-unspecerr%,%r6datapathregack-
adminprohib%,%r6datapathregack-noresourcedrop%,%r6datapathregack-
totrelay%,%r6datapathregack-totsendfail%,%r6datapathregack-
adminprohib%,%r6datapathregack-congestion%,%r6datapathregack-
```

```
noresourcedrop%,%r6datapathregreq-totrelay%,%r6datapathregreq-
totsendfail%,%r6datapathregrsp-adminprohib%,%r6datapathregrsp-
noresourcedrop%,%r6datapathregrsp-totrelay%,%r6datapathregrsp-
totsendfail%,%r6hoack-adminprohib%,%r6hoack-badform%
```

asngw schema asngwSchO format

```
EMS,ASNGWO,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6h
oack-decodeerr%,%r6hoack-duptlvfound%,%r6hoack-missmandtlv%,%r6hoack-
noresourcedrop%,%r6hoack-nosessfound%,%r6hoack-retranssent%,%r6hoack-
tlvvalinval%,%r6hoack-totacc%,%r6hoack-totdenied%,%r6hoack-totdiscard%,%r6hoack-
totrec%,%r6hoack-totrelay%,%r6hoack-totsendfail%,%r6hoack-totsent%,%r6hoack-
transiderr%,%r6hoack-unknownntlv%,%r6hoack-unspecerr%,%r6hocmpl-
adminprohib%,%r6hocmpl-badform%,%r6hocmpl-decodeerr%,%r6hocmpl-
duptlvfound%,%r6hocmpl-missmandtlv%,%r6hocmpl-noresourcedrop%,%r6hocmpl-
nosessfound%,%r6hocmpl-retranssent%,%r6hocmpl-tlvvalinval%,%r6hocmpl-
totacc%,%r6hocmpl-totdenied%,%r6hocmpl-totdiscard%,%r6hocmpl-totrec%,%r6hocmpl-
totrelay%,%r6hocmpl-totsendfail%,%r6hocmpl-totsent%,%r6hocmpl-
transiderr%,%r6hocmpl-unknownntlv%,%r6hocmpl-unspecerr%,%r6hocnf-
adminprohib%,%r6hocnf-badform%,%r6hocnf-decodeerr%,%r6hocnf-
duptlvfound%,%r6hocnf-missmandtlv%,%r6hocnf-noresourcedrop%,%r6hocnf-
nosessfound%,%r6hocnf-retranssent%,%r6hocnf-tlvvalinval%,%r6hocnf-
totacc%,%r6hocnf-totdenied%,%r6hocnf-totdiscard%,%r6hocnf-totrec%,%r6hocnf-
totrelay%,%r6hocnf-totsendfail%,%r6hocnf-totsent%,%r6hocnf-transiderr%,%r6hocnf-
unknownntlv%,%r6hocnf-unspecerr%,%r6horeq-adminprohib%,%r6horeq-
badform%,%r6horeq-decodeerr%,%r6horeq-duptlvfound%,%r6horeq-
missmandtlv%,%r6horeq-noresourcedrop%,%r6horeq-nosessfound%,%r6horeq-
retranssent%,%r6horeq-tlvvalinval%,%r6horeq-totacc%,%r6horeq-
totdenied%,%r6horeq-totdiscard%,%r6horeq-totrec%,%r6horeq-totrelay%
```

asngw schema asngwSchP format

```
EMS,ASNGWP,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6h
oreq-totsendfail%,%r6horeq-totsent%,%r6horeq-transiderr%,%r6horeq-
unknownntlv%,%r6horeq-unspecerr%,%r6horsp-adminprohib%,%r6horsp-
badform%,%r6horsp-decodeerr%,%r6horsp-duptlvfound%,%r6horsp-
missmandtlv%,%r6horsp-noresourcedrop%,%r6horsp-nosessfound%,%r6horsp-
retranssent%,%r6horsp-tlvvalinval%,%r6horsp-totacc%,%r6horsp-
totdenied%,%r6horsp-totdiscard%,%r6horsp-totrec%,%r6horsp-totrelay%,%r6horsp-
totsendfail%,%r6horsp-totsent%,%r6horsp-transiderr%,%r6horsp-
unknownntlv%,%r6horsp-unspecerr%,%r6imexitstaind-admprohibit%,%r6imexitstaind-
badform%,%r6imexitstaind-decodeerr%,%r6imexitstaind-
duptlvfound%,%r6imexitstaind-missmandtlv%,%r6imexitstaind-
noresourcedrop%,%r6imexitstaind-nosessfound%,%r6imexitstaind-
retranssent%,%r6imexitstaind-tlvvalinval%,%r6imexitstaind-
totacc%,%r6imexitstaind-totdenied%,%r6imexitstaind-totdiscard%,%r6imexitstaind-
totrec%,%r6imexitstaind-totrelay%,%r6imexitstaind-totsendfail%,%r6imexitstaind-
totsent%,%r6imexitstaind-transiderr%,%r6imexitstaind-
unknownntlv%,%r6imexitstaind-unspecerr%,%r6imexitstaindack-
admprohibit%,%r6imexitstaindack-badform%,%r6imexitstaindack-
decodeerr%,%r6imexitstaindack-duptlvfound%,%r6imexitstaindack-
missmandtlv%,%r6imexitstaindack-noresourcedrop%,%r6imexitstaindack-
nosessfound%,%r6imexitstaindack-retranssent%,%r6imexitstaindack-
tlvvalinval%,%r6imexitstaindack-totacc%,%r6imexitstaindack-
```

```
totdenied%,%r6imexitstaindack-totdiscard%,%r6imexitstaindack-
totrec%,%r6imexitstaindack-totrelay%
```

```
asngw schema asngwSchQ format
```

```
EMS,ASNGWQ,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6i
mexitstaindack-totsendfail%,%r6imexitstaindack-totsent%,%r6imexitstaindack-
transiderr%,%r6imexitstaindack-unknownltlv%,%r6imexitstaindack-
unspecerr%,%r6keychaack-adminprohib%,%r6keychaack-noresourcedrop%,%r6keychaack-
totrelay%,%r6keychaack-totsendfail%,%r6keychacnf-adminprohib%,%r6keychacnf-
badform%,%r6keychacnf-decodeerr%,%r6keychacnf-duptltlvfound%,%r6keychacnf-
missmandtlv%,%r6keychacnf-noresourcedrop%,%r6keychacnf-
nosessfound%,%r6keychacnf-tlvvalinval%,%r6keychacnf-totacc%,%r6keychacnf-
totdenied%,%r6keychacnf-totdiscard%,%r6keychacnf-totrec%,%r6keychacnf-
totrelay%,%r6keychacnf-transiderr%,%r6keychacnf-unknownltlv%,%r6keychacnf-
unspecerr%,%r6keychadir-adminprohib%,%r6keychadir-noresourcedrop%,%r6keychadir-
totrelay%,%r6keychadir-totsendfail%,%r6msattack-adminprohib%,%r6msattack-
noresourcedrop%,%r6msattack-totrelay%,%r6msattack-totsendfail%,%r6msattreq-
adminprohib%,%r6msattreq-noresourcedrop%,%r6msattreq-totrelay%,%r6msattreq-
totsendfail%,%r6msattrsp-adminprohib%,%r6msattrsp-noresourcedrop%,%r6msattrsp-
totrelay%,%r6msattrsp-totsendfail%,%r6mspreattack-adminprohib%,%r6mspreattack-
noresourcedrop%,%r6mspreattack-totrelay%,%r6mspreattack-
totsendfail%,%r6mspreattreq-adminprohib%,%r6mspreattreq-
congestion%,%r6mspreattreq-noresourcedrop%,%r6mspreattreq-
totrelay%,%r6mspreattreq-totsendfail%,%r6mspreattrsp-
adminprohib%,%r6mspreattrsp-noresourcedrop%,%r6mspreattrsp-
totrelay%,%r6mspreattrsp-totsendfail%,%r6nwexitmsstachareq-adminprohib%
```

```
asngw schema asngwSchR format
```

```
EMS,ASNGWR,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6n
wexitmsstachareq-badform%,%r6nwexitmsstachareq-decodeerr%,%r6nwexitmsstachareq-
duptltlvfound%,%r6nwexitmsstachareq-missmandtlv%,%r6nwexitmsstachareq-
noresourcedrop%,%r6nwexitmsstachareq-nosessfound%,%r6nwexitmsstachareq-
retranssent%,%r6nwexitmsstachareq-tlvvalinval%,%r6nwexitmsstachareq-
totacc%,%r6nwexitmsstachareq-totdenied%,%r6nwexitmsstachareq-
totdiscard%,%r6nwexitmsstachareq-totrec%,%r6nwexitmsstachareq-
totrelay%,%r6nwexitmsstachareq-totsendfail%,%r6nwexitmsstachareq-
totsent%,%r6nwexitmsstachareq-transiderr%,%r6nwexitmsstachareq-
unknownltlv%,%r6nwexitmsstachareq-unspecerr%,%r6nwexitmsstacharsp-
adminprohib%,%r6nwexitmsstacharsp-badform%,%r6nwexitmsstacharsp-
decodeerr%,%r6nwexitmsstacharsp-duptltlvfound%,%r6nwexitmsstacharsp-
missmandtlv%,%r6nwexitmsstacharsp-noresourcedrop%,%r6nwexitmsstacharsp-
nosessfound%,%r6nwexitmsstacharsp-retranssent%,%r6nwexitmsstacharsp-
tlvvalinval%,%r6nwexitmsstacharsp-totacc%,%r6nwexitmsstacharsp-
totdenied%,%r6nwexitmsstacharsp-totdiscard%,%r6nwexitmsstacharsp-
totrec%,%r6nwexitmsstacharsp-totrelay%,%r6nwexitmsstacharsp-
totsendfail%,%r6nwexitmsstacharsp-totsent%,%r6nwexitmsstacharsp-
transiderr%,%r6nwexitmsstacharsp-unknownltlv%,%r6nwexitmsstacharsp-
unspecerr%,%r6unknown-adminprohib%,%r6unknown-noresourcedrop%,%r6unknown-
totrelay%,%total-sessions-connected%,%r6keepalivereq-totsent%,%r6keepalivereq-
retranssent%,%r6keepalivereq-totsendfail%,%r6keepalivereq-
totrec%,%r6keepalivereq-totacc%
```

```

asngw schema asngwSchS format
EMS,ASNGWS,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%r6keepalivereq-totrelay%,%r6keepalivereq-totdenied%,%r6keepalivereq-totdiscard%,%r6keepalivereq-badform%,%r6keepalivereq-decodeerr%,%r6keepalivereq-unspecerr%,%r6keepalivereq-tlvvalinval%,%r6keepalivereq-missmandtlv%,%r6keepalivereq-unknownctlv%,%r6keepalivereq-duptlvfound%,%r6keepalivereq-nosessfound%,%r6keepalivereq-noresourcedrop%,%r6keepalivereq-admprohibit%,%r6keepalivereq-transiderr%,%r6keepaliversp-totsent%,%r6keepaliversp-retranssent%,%r6keepaliversp-totseendfail%,%r6keepaliversp-totrec%,%r6keepaliversp-totacc%,%r6keepaliversp-totrelay%,%r6keepaliversp-totdenied%,%r6keepaliversp-totdiscard%,%r6keepaliversp-badform%,%r6keepaliversp-decodeerr%,%r6keepaliversp-unspecerr%,%r6keepaliversp-tlvvalinval%,%r6keepaliversp-missmandtlv%,%r6keepaliversp-unknownctlv%,%r6keepaliversp-duptlvfound%,%r6keepaliversp-nosessfound%,%r6keepaliversp-noresourcedrop%,%r6keepaliversp-admprohibit%,%r6keepaliversp-transiderr%

```

```

sgsn schema sgsnSch1 format
EMS,SGSN1,%date%,%time%,%vpnname%,%vpnid%,%servname%,%3G-attached%,%2G-attached%,%3G-home-subscribers%,%2G-home-subscribers%,%3G-visiting-national%,%2G-visiting-national%,%3G-visiting-foreign%,%2G-visiting-foreign%,%pmm-connected%,%pmm-idle%,%3G-IMSI-Attch%,%2G-IMSI-Attch%,%3G-ptmsi-Attch%,%2G-ptmsi-Attch%,%3G-attach-accept%,%2G-attach-accept%,%3G-attach-complete%,%2G-attach-complete%,%3G-attach-reject%,%2G-attach-reject%,%3G-intra-rau%,%2G-intra-rau%,%3G-periodic-rau%,%2G-periodic-rau%,%3G-inter-sgsn-rau%,%2G-inter-sgsn-rau%,%3G-rau-complete%,%2G-rau-complete%,%3G-rau-reject%,%2G-rau-reject%,%3G-ms-init-detach%,%2G-ms-init-detach%,%3G-nw-init-detach%,%2G-nw-init-detach%,%3G-ms-init-detach-accept%,%2G-ms-init-detach-accept%,%3G-nw-init-detach-accept%,%2G-nw-init-detach-accept%,%3G-signalling-service-request%,%2G-signalling-service-request%,%3G-data-service-request%,%2G-data-service-request%,%3G-service-response%,%2G-service-response%,%3G-service-reject%,%2G-service-reject%,%3G-paging-request%,%2G-paging-request%,%3G-gmm-status-sent%,%2G-gmm-status-sent%,%3G-gmm-status-rcvd%,%2G-gmm-status-rcvd%,%3G-auth-cipher-request%,%2G-auth-cipher-request%,%3G-auth-cipher-response%,%2G-auth-cipher-response%,%3G-auth-cipher-reject%,%2G-auth-cipher-reject%,%3G-auth-cipher-mac-fail%,%2G-auth-cipher-mac-fail%,%3G-auth-cipher-syn-fail%,%2G-auth-cipher-syn-fail%,%3G-ptmsi-realloc%,%2G-ptmsi-realloc%,%3G-ptmsi-realloc-complete%,%2G-ptmsi-realloc-complete%,%3G-imsi-identity-request%,%2G-imsi-identity-request%,%3G-imeisv-identity-request%,%2G-imeisv-identity-request%,%3G-imsi-identity-response%,%2G-imsi-identity-response%,%3G-imeisv-identity-response%,%2G-imeisv-identity-response%,%3G-unknown-identity-response%,%2G-unknown-identity-response%

```

```

sgsn schema sgsnSch2 format
EMS,SGSN2,%date%,%time%,%vpnname%,%vpnid%,%servname%,%common-id-sent%,%sec-mode-command%,%sec-mode-complete%,%sec-mode-reject%,%Iu-release-request%,%Iu-release-command%,%Iu-release-complete%,%Reset-received%,%Retransmitted-reset-received%,%Reset-Ack-sent%,%Reset-sent%,%Retransmitted-reset-sent%,%Reset-Ack-received%,%Resource-reset-received%,%Resource-reset-ack-sent%,%Resource-reset-sent%,%Resource-reset-ack-received%,%Error-indication-rcvd%,%Relocation-required%,%Relocation-command%,%Relocation-request%,%Relocation-request-

```

```
ack%,%Relocation-failure%,%Relocation-prep-failure%,%Relocation-
cancel%,%Relocation-cancel-ack%,%Relocation-detect%,%Relocation-
complete%,%Forward-srns-context%,%GMM-received-nas-pdu%,%GMM-sent-nas-pdu%,%SM-
received-nas-pdu%,%SM-sent-nas-pdu%,%Unidentified-nas-pdu%,%3G-total-actv-
req%,%3G-total-actv-accept%,%3G-ms-modify-req%,%3G-ms-modify-accept%,%3G-nw-
modify-req%,%3G-nw-modify-accept%,%3G-ms-deactv-req%,%3G-ms-deactv-accept%,%3G-
sgsn-init-deact-req%,%3G-sgsn-init-deact-acc%,%RNC-rab-modify-req%,%RNC-rab-rel-
req%,%rab-assign-req%,%rab-assign-rsp%,%rab-set/mod-req%,%rab-set/mod-acc%,%rab-
rel-req%,%rab-rel-accept%,%map-open-req-tx%,%map-open-req-rx%,%map-open-rsp-
tx%,%map-open-rsp-rx%,%map-close-tx%,%map-close-rx%,%map-abort-tx%,%map-abort-
rx%,%map-gprs-update-loc-req-tx%,%map-gprs-update-loc-rsp-tx%,%map-gprs-update-
loc-err-tx%,%map-gprs-update-loc-timeouts-rx%,%map-cancel-loc-req-rx%,%map-
cancel-loc-rsp-tx%,%map-cancel-loc-err-tx%,%map-del-subs-req-rx%,%map-del-subs-
rsp-tx%,%map-del-subs-ret-tx%,%map-auth-timeouts-rcvd%,%map-purge-timeouts-
rcvd%,%map-insert-subs-rcvd%,%map-standalone-isd-rcvd%,%map-isd-rsp-tx%,%map-
isd-err-tx%,%map-auth-fail-rept-req-tx%,%map-auth-fail-rept-rsp-rx%,%map-auth-
fail-rept-err-rx%
```

#### sgsn schema sgsnSch3 format

```
EMS,SGSN3,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%map-auth-fail-rept-
timeouts-rcvd%,%map-hlr-reset-rcvd%,%tcap-total-active-trans%,%tcap-total-
active-invoks%,%tcap-total-msg-drops%,%tcap-total-msg-rcvd%,%tcap-total-msg-
sent%,%tcap-total-abort-rcvd%,%tcap-total-abort-sent%,%tcap-total-comp-
rx%,%tcap-total-comp-tx%,%tcap-comp-reterr-rx%,%tcap-comp-reterr-tx%,%tcap-comp-
retrej-rx%,%tcap-comp-retrej-tx%,%tcap-tran-incorrect-rx%,%tcap-tran-incorrect-
tx%,%tcap-tran-badformed-rx%,%tcap-tran-badformed-tx%,%tcap-tran-unrecognised-
rx%,%tcap-tran-unrecognised-tx%,%tcap-comp-incorrect-rx%,%tcap-comp-incorrect-
tx%,%tcap-comp-badformed-rx%,%tcap-comp-badformed-tx%,%tcap-comp-unrec-invid-
res-rx%,%tcap-comp-unrec-invid-res-tx%,%tcap-comp-unexp-res-rx%,%tcap-comp-
unexp-res-tx%,%tcap-user-unrec-opcode-rx%,%tcap-user-unrec-opcode-tx%,%tcap-
user-incorr-params-rx%,%tcap-user-incorr-params-tx%,%tcap-user-resourcelimit-
rx%,%tcap-user-resourcelimit-tx%,%rab-set/mod-tmr-expired%,%rab-rel-tmr-
expired%,%3G-rau-accept-intra%,%3G-rau-accept-inter%,%2G-rau-accept-intra%,%2G-
rau-accept-inter%,%3G-attached-with-pdp%,%3G-attached-no-pdp%,%3G-gmm-info-
sent%,%2G-gmm-info-sent%,%3G-auth-cipher-rsp-sres-mismatch%,%2G-auth-cipher-rsp-
sres-mismatch%,%3G-auth-unacceptable%,%2G-auth-unacceptable%,%3G-imei-identity-
request%,%2G-imei-identity-request%,%3G-imei-identity-response%,%2G-imei-
identity-response%,%Initial-UE-Rcvd%,%Direct-Trans-Rcvd%,%Error-indication-
sent%,%3G-total-num-actv-pdp%,%3G-primary-actv-req%,%3G-primary-actv-
accept%,%3G-primary-actv-reject%,%3G-secondary-actv-req%,%3G-secondary-actv-
acc%,%3G-secondary-actv-rej%,%3G-dupl-ti-pdpactive%,%3G-dupl-nsapi-pdpactv%,%3G-
dupl-pdpaddr-apn-pdpactv%,%3G-dupl-ti-n-pdpactive%,%3G-dupl-pdpaddr-apn-n-
pdpactv%,%3G-ms-modify-rej%,%3G-nw-modify-rej%,%3G-ms-deactv-reject%
```

#### sgsn schema sgsnSch4 format

```
EMS,SGSN4,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%3G-sgsn-init-deact-
rej%,%3G-total-sm-status-req-rx%,%3G-total-sm-status-req-tx%,%RNC-rab-modify-
num%,%RNC-rab-rel-num%,%rab-set/mod-fail%,%rab-rel-fail%,%rab-queued%,%total-
rab-rej%,%SRNS-ctxt-req-sent%,%SRNS-ctxt-rsp-rcvd%,%SRNS-ctxt-req-tmr-
expired%,%SRNS-ctxt-total-pdp-acc%,%SRNS-ctxt-total-pdp-rej%,%SRNS-data-fwd-cmd-
sent%,%map-auth-req-tx%,%map-auth-succes%,%map-auth-fail%,%map-imei-req-
tx%,%map-imei-succes%,%map-imei-fail%,%map-imei-timeout%,%map-purge-req-
```

```
tx%,%map-purge-success%,%map-purge-fail%,%tcap-uni-dir-msg-rcvd%,%tcap-uni-dir-
msg-sent%,%tcap-begin-msg-rcvd%,%tcap-begin-msg-sent%,%tcap-continue-msg-
rcvd%,%tcap-continue-msg-sent%,%tcap-end-msg-rcvd%,%tcap-end-msg-sent%,%tcap-
total-comp-invoke-rx%,%tcap-total-comp-invoke-tx%,%tcap-comp-retresult-
rx%,%tcap-comp-retresult-tx%,%tcap-tran-unrec-msgtype-rx%,%tcap-tran-unrec-
msgtype-tx%,%tcap-tran-resource-limit-rx%,%tcap-tran-resource-limit-tx%,%tcap-
comp-unrecognised-rx%,%tcap-comp-unrecognised-tx%,%tcap-comp-unrec-linkid-
rx%,%tcap-comp-unrec-linkid-tx%,%tcap-comp-unrec-invid-err-rx%,%tcap-comp-unrec-
invid-err-tx%,%tcap-comp-unexp-err-rx%,%tcap-comp-unexp-err-tx%,%tcap-user-
duplicate-invid-rx%,%tcap-user-duplicate-invid-tx%,%tcap-user-unexp-linked-resp-
rx%,%tcap-user-unexp-linked-resp-tx%,%tcap-user-unexp-linked-oper-rx%,%tcap-
user-unexp-linked-oper-tx%,%tcap-user-res-incorr-params-rx%,%tcap-user-res-
incorr-params-tx%,%tcap-user-res-unrec-errcode-rx%,%tcap-user-res-unrec-errcode-
tx%,%tcap-user-res-unexp-errcode-rx%,%tcap-user-res-unexp-errcode-tx%,%tcap-
user-err-incorr-params-rx%,%tcap-user-err-incorr-params-tx%,%tcap-user-initiate-
release-rx%,%tcap-user-initiate-release-tx%,%3G-dupl-nsapi-n-pdpactv%,%Direct-
Trans-Sent%,%3G-T3350-expiry%
```

#### sgsn schema sgsnSch5 format

```
EMS,SGSN5,%date%,%time%,%vpnname%,%vpnid%,%servname%,%2G-T3350-expiry%,%3G-
T3360-expiry%,%2G-T3360-expiry%,%3G-T3370-expiry%,%2G-T3370-expiry%,%3G-T3322-
expiry%,%2G-T3322-expiry%,%3G-T3313-expiry%,%2G-T3313-
expiry%,%mcc%,%mnc%,%lac%,%rac%,%2G-local-ptmsi-Attch%,%2G-paging-success%,%2G-
remote-ptmsi-Attch%,%3G-actv-rej-apn-restriction-incompatible%,%3G-actv-rej-by-
ggsn%,%3G-actv-rej-conditional-ie-err%,%3G-actv-rej-ie-non-existent%,%3G-actv-
rej-insufficient-resources%,%3G-actv-rej-invalid-mandatory-info%,%3G-actv-rej-
missing-or-unknown-apn%,%3G-actv-rej-msg-not-compatible-with-prot-state%,%3G-
actv-rej-msg-type-non-existent%,%3G-actv-rej-network-failure%,%3G-actv-rej-
odb%,%3G-actv-rej-pdp-notft-actv%,%3G-actv-rej-prot-err-unspecified%,%3G-actv-
rej-recovery-on-timer-expiry%,%3G-actv-rej-semantically-incorrect%,%3G-actv-rej-
semantic-err-in-pkt-filter%,%3G-actv-rej-semantic-error-tft-operation%,%3G-actv-
rej-service-not-subscribed%,%3G-actv-rej-service-not-supported%,%3G-actv-rej-
svc-opt-tmp-out-of-order%,%3G-actv-rej-syntax-err-in-pkt-filter%,%3G-actv-rej-
syntax-err-in-tft-operation%,%3G-actv-rej-unknown-pdp-addr-type%,%3G-actv-rej-
unknown-pdp-context%,%3G-actv-rej-unspecified-error%,%3G-actv-rej-usr-auth-
failed%,%3G-attach-rej-congestion%,%3G-attach-rej-illegal-me%,%3G-attach-rej-
illegal-ms%,%3G-attach-rej-implicitly-detach%,%3G-attach-rej-imsi-unknown-at-
hlr%,%3G-attach-rej-network-failure%,%3G-attach-rej-plmn-not-allowed%,%3G-
attach-rej-unknown-cause%,%3G-detached%,%3G-ggsn-init-deact-acc%,%3G-ggsn-init-
deact-rej%,%3G-ggsn-init-deact-req%,%3G-gprs-and-non-gprs-service-not-
allowed%,%3G-gprs-service-not-allowed%,%3G-gprs-service-not-allowed-in-this-
plmn%,%3G-hlr-init-deact-acc%,%3G-hlr-init-deact-rej%,%3G-hlr-init-deact-
req%,%3G-local-ptmsi-Attch%
```

#### sgsn schema sgsnSch6 format

```
EMS,SGSN6,%date%,%time%,%vpnname%,%vpnid%,%servname%,%3G-no-suitable-cells-in-
location-area%,%3G-paging-success%,%3G-total-attach-req%,%exist-conn-proc-rej-
overload%,%new-connection-rejected-overload%,%3G-total-actv-pdp-with-dir-
tunnel%,%3G-remote-ptmsi-Attch%,%3G-roaming-not-allowed-in-this-location-
area%,%3G-inter-rau-reject%,%3G-total-inter-rau-failure%,%3G-rau-accept-
periodic%,%3G-periodic-rau-reject%,%3G-total-periodic-rau-failure%,%3G-intra-
rau-reject%,%3G-total-intra-rau-failure%,%3G-total-attach-fail%,%3G-total-actv-
```

```
reject%,%3G-total-actv-fail%,%3G-intra-rau-rej-imsi-unknown-hlr%,%2G-intra-rau-
rej-imsi-unknown-hlr%,%3G-intra-rau-rej-illegal-ms%,%2G-intra-rau-rej-illegal-
ms%,%3G-intra-rau-rej-illegal-me%,%2G-intra-rau-rej-illegal-me%,%3G-intra-rau-
rej-gprs-svc-not-allw%,%2G-intra-rau-rej-gprs-svc-not-allw%,%3G-intra-rau-rej-
nongprs-svc-not-allow%,%2G-intra-rau-rej-nongprs-svc-not-allow%,%3G-intra-rau-
rej-msid-not-derived-by-nw%,%2G-intra-rau-rej-msid-not-derived-by-nw%,%3G-intra-
rau-rej-implicitly-detach%,%2G-intra-rau-rej-implicitly-detach%,%3G-intra-rau-
rej-plmn-not-allowed%,%2G-intra-rau-rej-plmn-not-allowed%,%3G-intra-rau-rej-loc-
area-not-allow%,%2G-intra-rau-rej-loc-area-not-allow%,%3G-intra-rau-rej-roam-
not-allow-larea%,%2G-intra-rau-rej-roam-not-allow-larea%,%3G-intra-rau-rej-gprs-
svc-not-allow-plmn%,%2G-intra-rau-rej-gprs-svc-not-allow-plmn%,%3G-intra-rau-
rej-no-cells-in-loc-area%,%2G-intra-rau-rej-no-cells-in-loc-area%,%3G-intra-rau-
rej-msc-not-reachable%,%2G-intra-rau-rej-msc-not-reachable%,%3G-intra-rau-rej-
network-failure%,%2G-intra-rau-rej-network-failure%,%3G-intra-rau-rej-mac-
failure%,%2G-intra-rau-rej-mac-failure%,%3G-intra-rau-rej-syn-failure%,%2G-
intra-rau-rej-syn-failure%,%3G-intra-rau-rej-congestion%,%2G-intra-rau-rej-
congestion%
```

#### sgsn schema sgsnSch7 format

```
EMS,SGSN7,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%3G-intra-rau-rej-gsm-auth-
unacceptable%,%2G-intra-rau-rej-gsm-auth-unacceptable%,%3G-intra-rau-rej-no-pdp-
ctx-actv%,%2G-intra-rau-rej-no-pdp-ctx-actv%,%3G-intra-rau-rej-retry-from-new-
cell%,%2G-intra-rau-rej-retry-from-new-cell%,%3G-intra-rau-rej-inval-mand-
info%,%2G-intra-rau-rej-inval-mand-info%,%3G-intra-rau-rej-msg-type-non-
exist%,%2G-intra-rau-rej-msg-type-non-exist%,%3G-intra-rau-rej-mtype-incompat-
pstate%,%2G-intra-rau-rej-mtype-incompat-pstate%,%3G-intra-rau-rej-ie-non-
existent%,%2G-intra-rau-rej-ie-non-existent%,%3G-intra-rau-rej-cond-ie-
error%,%2G-intra-rau-rej-cond-ie-error%,%3G-intra-rau-rej-msg-incompat-prot-
state%,%2G-intra-rau-rej-msg-incompat-prot-state%,%3G-intra-rau-rej-prot-
error%,%2G-intra-rau-rej-prot-error%,%3G-intra-rau-rej-unknown-error%,%2G-intra-
rau-rej-unknown-error%,%3G-intra-prau-rej-imsi-unknown-hlr%,%2G-intra-prau-rej-
imsi-unknown-hlr%,%3G-intra-prau-rej-illegal-ms%,%2G-intra-prau-rej-illegal-
ms%,%3G-intra-prau-rej-illegal-me%,%2G-intra-prau-rej-illegal-me%,%3G-intra-
prau-rej-gprs-svc-not-allow%,%2G-intra-prau-rej-gprs-svc-not-allow%,%3G-intra-
prau-rej-nongprs-svc-not-allow%,%2G-intra-prau-rej-nongprs-svc-not-allow%,%3G-
intra-prau-rej-msid-not-derived-by-nw%,%2G-intra-prau-rej-msid-not-derived-by-
nw%,%3G-intra-prau-rej-implicitly-detach%,%2G-intra-prau-rej-implicitly-
detach%,%3G-intra-prau-rej-plmn-not-allowed%,%2G-intra-prau-rej-plmn-not-
allowed%,%3G-intra-prau-rej-loc-area-not-allowed%,%2G-intra-prau-rej-loc-area-
not-allowed%,%3G-intra-prau-rej-roam-not-allowed-larea%,%2G-intra-prau-rej-roam-
not-allowed-larea%,%3G-intra-prau-rej-gprs-svc-not-allowed-plmn%,%2G-intra-prau-
rej-gprs-svc-not-allowed-plmn%,%3G-intra-prau-rej-congestion%,%2G-intra-prau-
rej-congestion%
```

#### sgsn schema sgsnSch8 format

```
EMS,SGSN8,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%3G-intra-prau-rej-gsm-
auth-unacceptable%,%2G-intra-prau-rej-gsm-auth-unacceptable%,%3G-intra-prau-rej-
no-pdp-ctx-actv%,%2G-intra-prau-rej-no-pdp-ctx-actv%,%3G-intra-prau-rej-retry-
from-new-cell%,%2G-intra-prau-rej-retry-from-new-cell%,%3G-intra-prau-rej-sem-
wrong-msg%,%2G-intra-prau-rej-sem-wrong-msg%,%3G-intra-prau-rej-inval-mand-
info%,%2G-intra-prau-rej-inval-mand-info%,%3G-intra-prau-rej-msg-type-non-
exist%,%2G-intra-prau-rej-msg-type-non-exist%,%3G-intra-prau-rej-mtype-incompat-
```

```
pstate%,%2G-intra-prau-rej-mtype-incompat-pstate%,%3G-intra-prau-rej-ie-non-
existent%,%2G-intra-prau-rej-ie-non-existent%,%3G-intra-prau-rej-cond-ie-
error%,%2G-intra-prau-rej-cond-ie-error%,%3G-intra-prau-rej-msg-incompat-
pstate%,%2G-intra-prau-rej-msg-incompat-pstate%,%3G-intra-prau-rej-prot-
error%,%2G-intra-prau-rej-prot-error%,%3G-intra-prau-rej-unknown-error%,%2G-
intra-prau-rej-unknown-error%,%3G-inter-rau-rej-imsi-unknown-hlr%,%2G-inter-rau-
rej-imsi-unknown-hlr%,%3G-inter-rau-rej-illegal-ms%,%2G-inter-rau-rej-illegal-
ms%,%3G-inter-rau-rej-illegal-me%,%2G-inter-rau-rej-illegal-me%,%3G-inter-rau-
rej-gprs-svc-not-allow%,%2G-inter-rau-rej-gprs-svc-not-allow%,%3G-inter-rau-rej-
nongprs-svc-not-allow%,%2G-inter-rau-rej-nongprs-svc-not-allow%,%3G-inter-rau-
rej-msid-not-derived-by-nw%,%2G-inter-rau-rej-msid-not-derived-by-nw%,%3G-inter-
rau-rej-implicitly-detach%,%2G-inter-rau-rej-implicitly-detach%,%3G-inter-rau-
rej-plmn-not-allowed%,%2G-inter-rau-rej-plmn-not-allowed%,%3G-inter-rau-rej-loc-
area-not-allowed%,%2G-inter-rau-rej-loc-area-not-allowed%,%3G-inter-rau-rej-
roam-not-allowed-larea%,%2G-inter-rau-rej-roam-not-allowed-larea%,%3G-inter-rau-
rej-gprs-svc-not-allowed-plmn%,%2G-inter-rau-rej-gprs-svc-not-allowed-plmn%
```

#### sgsn schema sgsnSch9 format

```
EMS,SGSN9,%date%,%time%,%vpname%,%vpnid%,%servname%,%3G-inter-rau-rej-no-cells-
in-location-area%,%2G-inter-rau-rej-no-cells-in-location-area%,%3G-inter-rau-
rej-msc-not-reachable%,%2G-inter-rau-rej-msc-not-reachable%,%3G-inter-rau-rej-
network-failure%,%2G-inter-rau-rej-network-failure%,%3G-inter-rau-rej-mac-
failure%,%2G-inter-rau-rej-mac-failure%,%3G-inter-rau-rej-syn-failure%,%2G-
inter-rau-rej-syn-failure%,%3G-inter-rau-rej-congestion%,%2G-inter-rau-rej-
congestion%,%3G-inter-rau-rej-gsm-auth-unacceptable%,%2G-inter-rau-rej-gsm-auth-
unacceptable%,%3G-inter-rau-rej-no-pdp-ctx-actv%,%2G-inter-rau-rej-no-pdp-ctx-
actv%,%3G-inter-rau-rej-retry-from-new-cell%,%2G-inter-rau-rej-retry-from-new-
cell%,%3G-inter-rau-rej-sem-wrong-msg%,%2G-inter-rau-rej-sem-wrong-msg%,%3G-
inter-rau-rej-inval-mand-info%,%2G-inter-rau-rej-inval-mand-info%,%3G-inter-rau-
rej-msg-type-non-exist%,%2G-inter-rau-rej-msg-type-non-exist%,%3G-inter-rau-rej-
mtype-incompat-pstate%,%2G-inter-rau-rej-mtype-incompat-pstate%,%3G-inter-rau-
rej-ie-non-existent%,%2G-inter-rau-rej-ie-non-existent%,%3G-inter-rau-rej-cond-
ie-error%,%2G-inter-rau-rej-cond-ie-error%,%3G-inter-rau-rej-msg-not-compat-
pstate%,%2G-inter-rau-rej-msg-not-compat-pstate%,%3G-inter-rau-rej-prot-
error%,%2G-inter-rau-rej-prot-error%,%3G-inter-rau-rej-unknown-error%,%2G-inter-
rau-rej-unknown-error%,%3G-intra-ra-upd-rau-fail-iu_release%,%3G-intra-ra-upd-
rau-fail-ongoing-proc%,%2G-intra-ra-upd-rau-fail-ongoing-proc%,%3G-intra-perio-
rau-fail-iu_release%,%3G-intra-perio-rau-fail-ongoing-proc%,%2G-intra-perio-rau-
fail-ongoing-proc%,%3G-inter-rau-fail-iu_release%,%3G-inter-rau-fail-ongoing-
proc%,%2G-inter-rau-fail-ongoing-proc%,%3G-attach-fail-iu_release%,%3G-attach-
fail-ongoing-proc%,%2G-attach-fail-ongoing-proc%
```

#### sgsn schema sgsnSchA format

```
EMS,SGSNA,%date%,%time%,%vpname%,%vpnid%,%servname%,%2G-total-attach-fail%,%3G-
total-rau-failure%,%2G-total-rau-failure%,%2G-rau-accept-periodic%,%3G-ret-rau-
accept-periodic%,%2G-ret-rau-accept-periodic%,%2G-intra-rau-reject%,%2G-
periodic-rau-reject%,%2G-inter-rau-reject%,%2G-total-intra-rau-failure%,%2G-
total-periodic-rau-failure%,%2G-total-inter-rau-failure%,%2G-total-actv-
req%,%2G-total-actv-accept%,%2G-total-num-actv-pdp%,%2G-primary-actv-req%,%2G-
primary-actv-accept%,%2G-total-actv-reject%,%2G-primary-actv-reject%,%2G-
secondary-actv-req%,%2G-secondary-actv-acc%,%2G-secondary-actv-rej%,%2G-actv-
rej-odb%,%2G-actv-rej-insufficient-resources%,%2G-actv-rej-network-failure%,%2G-
```

```

actv-rej-missing-or-unknown-apn%, %2G-actv-rej-unknown-pdp-addr-type%, %2G-actv-
rej-usr-auth-failed%, %2G-actv-rej-by-ggsn%, %2G-actv-rej-unspecified-error%, %2G-
actv-rej-service-not-supported%, %2G-actv-rej-service-not-subscribed%, %2G-actv-
rej-svc-opt-tmp-out-of-order%, %2G-actv-rej-apn-restriction-incompatible%, %2G-
actv-rej-semantically-incorrect%, %2G-actv-rej-invalid-mandatory-info%, %2G-actv-
rej-msg-type-non-existent%, %2G-actv-rej-ie-non-existent%, %2G-actv-rej-
conditional-ie-err%, %2G-actv-rej-msg-not-compatible-with-prot-state%, %2G-actv-
rej-recovery-on-timer-expiry%, %2G-actv-rej-prot-err-unspecified%, %2G-actv-rej-
llc-sndcp-fail%, %2G-actv-rej-qos-not-acc%, %2G-actv-rej-semantic-error-tft-
operation%, %2G-actv-rej-syntax-err-in-tft-operation%, %2G-actv-rej-unknown-pdp-
context%, %2G-actv-rej-semantic-err-in-pkt-filter%, %2G-actv-rej-syntax-err-in-
pkt-filter%, %2G-actv-rej-pdp-notft-actv%, %2G-dupl-ti-pdpactive%, %2G-dupl-nsapi-
pdpactv%, %2G-dupl-pdpaddr-apn-pdpactv%, %2G-dupl-ti-n-pdpactive%, %2G-dupl-nsapi-
n-pdpactv%, %2G-dupl-pdpaddr-apn-n-pdpactv%

```

#### sgsn schema sgsnSchB format

```

EMS, SGSNB, %date%, %time%, %vpnname%, %vpnid%, %servname%, %2G-ms-modify-req%, %2G-ms-
modify-accept%, %2G-ms-modify-rej%, %2G-nw-modify-req%, %2G-nw-ret-modify-req%, %2G-
nw-modify-accept%, %2G-nw-modify-rej%, %2G-modify-rej-insufficient-resources%, %2G-
modify-rej-service-opt-not-supported%, %2G-modify-rej-semantic-err-tft-
operation%, %2G-modify-rej-syntax-err-tft-operation%, %2G-modify-rej-semnatic-err-
pkt-filter%, %2G-modify-rej-syntax-err-pkt-filter%, %2G-modify-rej-semnatic-
incorrect-message%, %2G-modify-rej-invalid-mand-info%, %2G-modify-rej-msg-non-
existent%, %2G-modify-rej-ie-non-existent%, %2G-modify-rej-conditional-ie-
err%, %2G-modify-rej-msg-not-compatible-prot-state%, %2G-modify-rej-rcvry-on-tmr-
expiry%, %2G-modify-rej-prot-err-unspec%, %2G-ms-deactv-req%, %2G-ms-deactv-
accept%, %2G-ms-deactv-reject%, %2G-ms-deactv-rej-rx-odb%, %2G-ms-deactv-rej-rx-
mbms-cap-insuff-res%, %2G-ms-deactv-rej-rx-llc-sndcp-fail-gb%, %2G-ms-deactv-rej-
rx-insuff-res%, %2G-ms-deactv-rej-rx-miss-unkwn-apn%, %2G-ms-deactv-rej-rx-unkwn-
pdp-addr%, %2G-ms-deactv-rej-rx-usr-auth-fail%, %2G-ms-deactv-rej-rx-actv-rej-
ggsn%, %2G-ms-deactv-rej-rx-actv-rej-unspec%, %2G-ms-deactv-rej-rx-service-opt-no-
support%, %2G-ms-deactv-rej-rx-service-opt-no-sub%, %2G-ms-deactv-rej-rx-svc-opt-
temp-out-order%, %2G-ms-deactv-rej-rx-nsapi-already-used%, %2G-ms-deactv-rej-rx-
reg-deactv%, %2G-ms-deactv-rej-rx-qos-not-acc%, %2G-ms-deactv-rej-rx-nwt-
fail%, %2G-ms-deactv-rej-rx-reactivation-req%, %2G-ms-deactv-rej-rx-no-feature-
support%, %2G-ms-deactv-rej-rx-sem-err-tft-op%, %2G-ms-deactv-rej-rx-syn-err-tft-
op%, %2G-ms-deactv-rej-rx-unknown-ctx%, %2G-ms-deactv-rej-rx-ctx-no-tft-already-
actv%, %2G-ms-deactv-rej-rx-mcast-grp-mem-tout%, %2G-ms-deactv-rej-rx-sem-err-pkt-
filter%, %2G-ms-deactv-rej-rx-syn-err-pkt-filter%, %2G-ms-deactv-rej-rx-invalid-
trans-id%

```

#### sgsn schema sgsnSchC format

```

EMS, SGSNC, %date%, %time%, %vpnname%, %vpnid%, %servname%, %2G-ms-deactv-rej-rx-sem-
incorrect-msg%, %2G-ms-deactv-rej-rx-inval-mand-info%, %2G-ms-deactv-rej-rx-msg-
non-existent%, %2G-ms-deactv-rej-rx-ie-non-existent%, %2G-ms-deactv-rej-rx-cond-
ie-err%, %2G-ms-deactv-rej-rx-prot-err-unspec%, %2G-ms-deactv-rej-rx-apn-rest-
incomap-actv-pdp%, %2G-ms-deactv-rej-rx-msg-not-compat-prot-state%, %2G-ms-deactv-
rej-rx-rcvry-on-tmr-expiry%, %2G-sgsn-init-deact-req%, %2G-sgsn-init-deact-
acc%, %2G-sgsn-init-deact-rej%, %2G-ggsn-init-deact-req%, %2G-ggsn-init-deact-
acc%, %2G-ggsn-init-deact-rej%, %2G-hlr-init-deact-req%, %2G-hlr-init-deact-
acc%, %2G-hlr-init-deact-rej%, %2G-nw-deactv-rej-tx-odb%, %2G-nw-deactv-rej-tx-
mbms-cap-insuff-res%, %2G-nw-deactv-rej-tx-llc-sndcp-fail-gb%, %2G-nw-deactv-rej-

```

```
tx-insuff-res%,%2G-nw-deactiv-rej-tx-miss-unkwn-apn%,%2G-nw-deactiv-rej-tx-unkwn-
pdp-addr%,%2G-nw-deactiv-rej-tx-usr-auth-fail%,%2G-nw-deactiv-rej-tx-activ-rej-
ggsn%,%2G-nw-deactiv-rej-tx-activ-rej-unspec%,%2G-nw-deactiv-rej-tx-service-opt-no-
support%,%2G-nw-deactiv-rej-tx-service-opt-no-subs%,%2G-nw-deactiv-rej-tx-svc-opt-
temp-out-order%,%2G-nw-deactiv-rej-tx-nsapi-already-used%,%2G-nw-deactiv-rej-tx-
reg-deactiv%,%2G-nw-deactiv-rej-tx-qos-not-acc%,%2G-nw-deactiv-rej-tx-nwt-
fail%,%2G-nw-deactiv-rej-tx-reactivation-req%,%2G-nw-deactiv-rej-tx-no-feature-
support%,%2G-nw-deactiv-rej-tx-sem-err-tft-op%,%2G-nw-deactiv-rej-tx-syn-err-tft-
op%,%2G-nw-deactiv-rej-tx-unknown-ctx%,%2G-nw-deactiv-rej-tx-ctx-no-tft-already-
activ%,%2G-nw-deactiv-rej-tx-mcast-grp-mem-tout%,%2G-nw-deactiv-rej-tx-sem-err-pkt-
filter%,%2G-nw-deactiv-rej-tx-syn-err-pkt-filter%,%2G-nw-deactiv-rej-tx-invalid-
trans-id%,%2G-nw-deactiv-rej-tx-sem-incorrect-msg%,%2G-nw-deactiv-rej-tx-inval-
mand-info%,%2G-nw-deactiv-rej-tx-msg-non-existent%,%2G-nw-deactiv-rej-tx-ie-non-
existent%
```

#### sgsn schema sgsnSchD format

```
EMS,SGSND,%date%,%time%,%vpname%,%vpnid%,%servname%,%2G-nw-deactiv-rej-tx-cond-
ie-err%,%2G-nw-deactiv-rej-tx-prot-err-unspec%,%2G-nw-deactiv-rej-tx-apn-rest-
incomap-activ-pdp%,%2G-nw-deactiv-rej-tx-msg-not-compat-prot-state%,%2G-nw-deactiv-
rej-tx-rcvry-on-tmr-expiry%,%2G-total-sm-status-req-rx%,%2G-total-sm-status-req-
tx%,%3G-IMSI-Attch-Combined%,%2G-IMSI-Attch-Combined%,%3G-ptmsi-Attch-
Combined%,%2G-ptmsi-Attch-Combined%,%3G-comb-attach-accept%,%2G-comb-attach-
accept%,%3G-intra-comb-rau%,%2G-intra-comb-rau%,%3G-inter-sgsn-comb-rau%,%2G-
inter-sgsn-comb-rau%,%3G-comb-upd-rau-accept-intra%,%3G-comb-upd-rau-accept-
inter%,%2G-comb-upd-rau-accept-intra%,%2G-comb-upd-rau-accept-inter%,%3G-ms-
init-imsi-detach%,%2G-ms-init-imsi-detach%,%3G-ms-init-comb-detach%,%2G-ms-init-
comb-detach%,%3G-nw-init-imsi-detach-accept%,%3G-nw-init-comb-detach-
accept%,%2G-nw-init-imsi-detach-accept%,%2G-nw-init-comb-detach-accept%,%3G-cs-
page-request%,%2G-cs-page-request%,%3G-total-attach-req-all%,%3G-total-comb-
attach-req%,%2G-total-attach-req-all%,%2G-total-comb-attach-req%,%3G-local-
ptmsi-Attch-comb%,%3G-remote-ptmsi-Attch-comb%,%2G-local-ptmsi-Attch-comb%,%2G-
remote-ptmsi-Attch-comb%,%3G-ret-imsi-attach-comb%,%2G-ret-imsi-attach-
comb%,%3G-ret-local-ptmsi-attach-comb%,%2G-ret-local-ptmsi-attach-comb%,%3G-ret-
remote-ptmsi-attach-comb%,%2G-ret-remote-ptmsi-attach-comb%,%3G-ret-attach-
accept-comb%,%2G-ret-attach-accept-comb%,%3G-total-attach-fail-comb%,%2G-total-
attach-fail-comb%,%3G-total-intra-rau-failure-comb%,%2G-total-intra-rau-failure-
comb%,%3G-total-comb-inter-rau-failure%,%2G-total-comb-inter-rau-failure%,%3G-
tmsi-identity-request%,%2G-tmsi-identity-request%,%3G-tmsi-identity-
response%,%2G-tmsi-identity-response%,%3G-ret-tmsi-identity-request%,%2G-ret-
tmsi-identity-request%
```

#### sgsn schema sgsnSchE format

```
EMS,SGSNE,%date%,%time%,%vpname%,%vpnid%,%servname%,%3G-attach-reject-all%,%3G-
attach-reject-comb%,%2G-attach-reject-all%,%2G-attach-reject-comb%,%3G-comb-
attach-rej-imsi-unknown-at-hlr%,%2G-comb-attach-rej-imsi-unknown-at-hlr%,%3G-
comb-attach-rej-illegal-ms%,%2G-comb-attach-rej-illegal-ms%,%3G-comb-attach-rej-
illegal-me%,%2G-comb-attach-rej-illegal-me%,%3G-comb-gprs-service-not-
allowed%,%2G-comb-gprs-service-not-allowed%,%3G-comb-gprs-and-non-gprs-svc-not-
allow%,%2G-comb-gprs-and-non-gprs-svc-not-allow%,%3G-comb-attach-rej-msid-not-
derived-by-nwt%,%2G-comb-attach-rej-msid-not-derived-by-nwt%,%3G-comb-attach-
rej-implicitly-detach%,%2G-comb-attach-rej-implicitly-detach%,%3G-comb-attach-
rej-plmn-not-allowed%,%2G-comb-attach-rej-plmn-not-allowed%,%3G-comb-attach-rej-
```

```

la-not-allowed%,%2G-comb-attach-rej-la-not-allowed%,%3G-comb-roam-not-allow-in-
loc-area%,%2G-comb-roam-not-allow-in-loc-area%,%3G-comb-gprs-svc-not-allow-in-
plmn%,%2G-comb-gprs-svc-not-allow-in-plmn%,%3G-comb-no-suitable-cells-in-loc-
area%,%2G-comb-no-suitable-cells-in-loc-area%,%3G-comb-attach-rej-msc-not-
reachable%,%2G-comb-attach-rej-msc-not-reachable%,%3G-comb-attach-rej-network-
failure%,%2G-comb-attach-rej-network-failure%,%3G-comb-attach-rej-mac-
failure%,%2G-comb-attach-rej-mac-failure%,%3G-comb-attach-rej-sync-failure%,%2G-
comb-attach-rej-sync-failure%,%3G-comb-attach-rej-congestion%,%2G-comb-attach-
rej-congestion%,%3G-comb-attach-rej-gsm-auth-unacceptable%,%2G-comb-attach-rej-
gsm-auth-unacceptable%,%3G-comb-attach-rej-no-pdp-ctx-activated%,%2G-comb-
attach-rej-no-pdp-ctx-activated%,%3G-comb-attach-rej-retry-from-new-cell%,%2G-
comb-attach-rej-retry-from-new-cell%,%3G-comb-attach-rej-sem-wrong-msg%,%2G-
comb-attach-rej-sem-wrong-msg%,%3G-comb-attach-rej-invalid-mand-info%

```

#### sgsn schema sgsnSchF format

```

EMS,SGSNF,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%2G-comb-attach-rej-
invalid-mand-info%,%3G-comb-attach-rej-msg-type-not-exist%,%2G-comb-attach-rej-
msg-type-not-exist%,%3G-comb-attach-rej-msg-type-not-comp-pstate%,%2G-comb-
attach-rej-msg-type-not-comp-pstate%,%3G-comb-attach-rej-ie-non-existent%,%2G-
comb-attach-rej-ie-non-existent%,%3G-comb-attach-rej-conditional-ie-err%,%2G-
comb-attach-rej-conditional-ie-err%,%3G-comb-attach-rej-msg-not-comp-prot-
state%,%2G-comb-attach-rej-msg-not-comp-prot-state%,%3G-comb-attach-rej-
protocol-error%,%2G-comb-attach-rej-protocol-error%,%3G-comb-attach-rej-unknown-
cause%,%2G-comb-attach-rej-unknown-cause%,%3G-comb-rau-reject%,%3G-comb-inter-
rau-reject%,%2G-comb-rau-reject%,%2G-comb-inter-rau-reject%,%3G-comb-rau-rej-
imsi-unknown-hlr%,%2G-comb-rau-rej-imsi-unknown-hlr%,%3G-comb-rau-rej-illegal-
ms%,%2G-comb-rau-rej-illegal-ms%,%3G-comb-rau-rej-illegal-me%,%2G-comb-rau-rej-
illegal-me%,%3G-comb-rau-rej-gprs-svc-not-allow%,%2G-comb-rau-rej-gprs-svc-not-
allow%,%3G-comb-rau-rej-nongprs-svc-not-allow%,%2G-comb-rau-rej-nongprs-svc-not-
allow%,%3G-comb-rau-rej-msid-not-derived-by-nw%,%2G-comb-rau-rej-msid-not-
derived-by-nw%,%3G-comb-rau-rej-implicitly-detach%,%2G-comb-rau-rej-implicitly-
detach%,%3G-comb-rau-rej-plmn-not-allowed%,%2G-comb-rau-rej-plmn-not-
allowed%,%3G-comb-rau-rej-loc-area-not-allowed%,%2G-comb-rau-rej-loc-area-not-
allowed%,%3G-comb-rau-rej-roam-not-allowed-larea%,%2G-comb-rau-rej-roam-not-
allowed-larea%,%3G-comb-rau-rej-gprs-svc-not-allowed-plmn%,%2G-comb-rau-rej-
gprs-svc-not-allowed-plmn%,%3G-comb-rau-rej-congestion%,%2G-comb-rau-rej-
congestion%,%3G-comb-rau-rej-gsm-auth-unacceptable%,%2G-comb-rau-rej-gsm-auth-
unacceptable%,%3G-comb-rau-rej-no-pdp-ctx-actv%,%2G-comb-rau-rej-no-pdp-ctx-
actv%

```

#### sgsn schema sgsnSchG format

```

EMS,SGSNG,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%3G-comb-rau-rej-retry-
from-new-cell%,%2G-comb-rau-rej-retry-from-new-cell%,%3G-comb-rau-rej-sem-wrong-
msg%,%2G-comb-rau-rej-sem-wrong-msg%,%3G-comb-rau-rej-inval-mand-info%,%2G-comb-
rau-rej-inval-mand-info%,%3G-comb-rau-rej-msg-type-non-exist%,%2G-comb-rau-rej-
msg-type-non-exist%,%3G-comb-rau-rej-mtype-incompat-pstate%,%2G-comb-rau-rej-
mtype-incompat-pstate%,%3G-comb-rau-rej-ie-non-existent%,%2G-comb-rau-rej-ie-
non-existent%,%3G-comb-rau-rej-cond-ie-error%,%2G-comb-rau-rej-cond-ie-
error%,%3G-comb-rau-rej-msg-incompat-pstate%,%2G-comb-rau-rej-msg-incompat-
pstate%,%3G-comb-rau-rej-prot-error%,%2G-comb-rau-rej-prot-error%,%3G-comb-rau-
rej-unknown-error%,%2G-comb-rau-rej-unknown-error%,%3G-comb-irau-rej-imsi-
unknown-hlr%,%2G-comb-irau-rej-imsi-unknown-hlr%,%3G-comb-irau-rej-illegal-

```

```
ms%,%2G-comb-irau-rej-illegal-ms%,%3G-comb-irau-rej-illegal-me%,%2G-comb-irau-
rej-illegal-me%,%3G-comb-irau-rej-gprs-svc-not-allow%,%2G-comb-irau-rej-gprs-
svc-not-allow%,%3G-comb-irau-rej-nongprs-svc-not-allow%,%2G-comb-irau-rej-
nongprs-svc-not-allow%,%3G-comb-irau-rej-msid-not-derived-by-nw%,%2G-comb-irau-
rej-msid-not-derived-by-nw%,%3G-comb-irau-rej-implicitly-detach%,%2G-comb-irau-
rej-implicitly-detach%,%3G-comb-irau-rej-plmn-not-allowed%,%2G-comb-irau-rej-
plmn-not-allowed%,%3G-comb-irau-rej-loc-area-not-allowed%,%2G-comb-irau-rej-loc-
area-not-allowed%,%3G-comb-irau-rej-roam-not-allowed-larea%,%2G-comb-irau-rej-
roam-not-allowed-larea%,%3G-comb-irau-rej-gprs-svc-not-allowed-plmn%,%2G-comb-
irau-rej-gprs-svc-not-allowed-plmn%,%3G-comb-irau-rej-no-cells-in-location-
area%,%2G-comb-irau-rej-no-cells-in-location-area%,%3G-comb-irau-rej-msc-not-
reachable%,%2G-comb-irau-rej-msc-not-reachable%,%3G-comb-irau-rej-network-
failure%
```

#### sgsn schema sgsnSchH format

```
EMS,SGSNH,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%2G-comb-irau-rej-network-
failure%,%3G-comb-irau-rej-mac-failure%,%2G-comb-irau-rej-mac-failure%,%3G-comb-
irau-rej-syn-failure%,%2G-comb-irau-rej-syn-failure%,%3G-comb-irau-rej-
congestion%,%2G-comb-irau-rej-congestion%,%3G-comb-irau-rej-gsm-auth-
unacceptable%,%2G-comb-irau-rej-gsm-auth-unacceptable%,%3G-comb-irau-rej-no-pdp-
ctx-actv%,%2G-comb-irau-rej-no-pdp-ctx-actv%,%3G-comb-irau-rej-retry-from-new-
cell%,%2G-comb-irau-rej-retry-from-new-cell%,%3G-comb-irau-rej-sem-wrong-
msg%,%2G-comb-irau-rej-sem-wrong-msg%,%3G-comb-irau-rej-inval-mand-info%,%2G-
comb-irau-rej-inval-mand-info%,%3G-comb-irau-rej-msg-type-non-exist%,%2G-comb-
irau-rej-msg-type-non-exist%,%3G-comb-irau-rej-mtype-incompat-pstate%,%2G-comb-
irau-rej-mtype-incompat-pstate%,%3G-comb-irau-rej-ie-non-existent%,%2G-comb-
irau-rej-ie-non-existent%,%3G-comb-irau-rej-cond-ie-error%,%2G-comb-irau-rej-
cond-ie-error%,%3G-comb-irau-rej-msg-not-compat-pstate%,%2G-comb-irau-rej-msg-
not-compat-pstate%,%3G-comb-irau-rej-prot-error%,%2G-comb-irau-rej-prot-
error%,%3G-comb-irau-rej-unknown-error%,%2G-comb-irau-rej-unknown-error%,%gprs-
standby%,%gprs-ready%,%3G-nw-ret-modify-req%,%2G-gprs-service-not-allowed%,%2G-
gprs-and-non-gprs-service-not-allowed%,%2G-roaming-not-allowed-in-this-location-
area%,%2G-gprs-service-not-allowed-in-this-plmn%,%2G-no-suitable-cells-in-
location-area%,%2G-attach-rej-network-failure%,%2G-attach-rej-congestion%,%3G-
sec-actv-rej-service-not-supported%,%3G-sec-actv-rej-service-not-
subscribed%,%2G-total-actv-fail%,%2G-sec-actv-rej-service-not-supported%,%2G-
sec-actv-rej-service-not-subscribed%,%2G-attached-with-pdp%,%intra-sgsn-inter-
system-gsm-to-wcdma-success%,%intra-sgsn-inter-system-gsm-to-wcdma-rej%
```

#### sgsn schema sgsnSchI format

```
EMS,SGSNI,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%intra-sgsn-inter-system-
gsm-to-wcdma-fail%,%intra-sgsn-inter-system-wcdma-to-gsm-success%,%intra-sgsn-
inter-system-wcdma-to-gsm-rej%,%intra-sgsn-inter-system-wcdma-to-gsm-fail%,%Rnc-
overload-attach-dropped%,%Rnc-overload-service-req-dropped%,%Rnc-overload-skip-
ptmsi-realloc%,%Rnc-overload-skip-auth%,%Overload-control-rcvd%,%Pc-congested-
rcvd%,%SMS-received-nas-pdu%,%SMS-sent-nas-pdu%,%SMS-unexpected-nas-pdu%,%2G-
attach-rej-imsi-unknown-at-hlr%,%2G-attach-rej-illegal-ms%,%2G-attach-rej-
illegal-me%,%3G-attach-rej-msid-not-derived-by-nwt%,%2G-attach-rej-msid-not-
derived-by-nwt%,%2G-attach-rej-implicitly-detach%,%2G-attach-rej-plmn-not-
allowed%,%3G-attach-rej-la-not-allowed%,%2G-attach-rej-la-not-allowed%,%3G-
attach-rej-msc-not-reachable%,%2G-attach-rej-msc-not-reachable%,%3G-attach-rej-
mac-failure%,%2G-attach-rej-mac-failure%,%3G-attach-rej-sync-failure%,%2G-
```

```
attach-rej-sync-failure%,%3G-attach-rej-gsm-auth-unacceptable%,%2G-attach-rej-
gsm-auth-unacceptable%,%3G-attach-rej-no-pdp-ctx-activated%,%2G-attach-rej-no-
pdp-ctx-activated%,%3G-attach-rej-retry-from-new-cell%,%2G-attach-rej-retry-
from-new-cell%,%3G-attach-rej-sem-wrong-msg%,%2G-attach-rej-sem-wrong-msg%,%3G-
attach-rej-invalid-mand-info%,%2G-attach-rej-invalid-mand-info%,%3G-attach-rej-
msg-type-not-exist%,%2G-attach-rej-msg-type-not-exist%,%3G-attach-rej-msg-type-
not-comp-prot-state%,%2G-attach-rej-msg-type-not-comp-prot-state%,%3G-attach-
rej-ie-non-existent%,%2G-attach-rej-ie-non-existent%,%3G-attach-rej-conditional-
ie-err%,%2G-attach-rej-conditional-ie-err%,%3G-attach-rej-msg-not-comp-prot-
state%,%2G-attach-rej-msg-not-comp-prot-state%,%3G-attach-rej-protocol-
error%,%2G-attach-rej-protocol-error%,%2G-attach-rej-unknown-cause%
```

#### sgsn schema sgsnSchJ format

```
EMS,SGSNJ,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%3G-attach-fail-iu_release-
comb%,%3G-attach-fail-ongoing-proc-comb%,%2G-attach-fail-ongoing-proc-comb%,%3G-
cs-page-response%,%2G-cs-page-response%,%3G-auth-cipher-rej-xres-mismatch%,%2G-
auth-cipher-rej-xres-mismatch%,%3G-auth-cipher-rej-sync-not-have-auts%,%2G-auth-
cipher-rej-sync-not-have-auts%,%3G-auth-cipher-rej-many-sync-fail%,%2G-auth-
cipher-rej-many-sync-fail%,%3G-auth-cipher-rej-many-mac-fail%,%2G-auth-cipher-
rej-many-mac-fail%,%2G-ready-timer-expiry%,%map-mt-fwd-req-sent%,%map-mt-fwd-
rsp-rcvd%,%map-mo-fwd-rsp-time-out%,%mo-sms-in-progress%,%mt-sms-in-
progress%,%sms-memory-available-in-progress%,%mo-sms-attempted%,%mo-sms-
successful%,%mt-sms-attempted%,%mt-sms-successful%,%sms-memory-available-
attempted%,%sms-memory-available-successful%,%3G-actv-fail-iu-release-before-
activate%,%3G-actv-fail-gaurd-timer-expiry%,%3G-actv-fail-duplicate-
activation%,%3G-actv-fail-other-ongoing-procedure%,%3G-actv-fail-tunnel-
deactivation%,%3G-actv-fail-handoff-before-activate-over%,%3G-actv-fail-detach-
before-activate-over%,%3G-actv-fail-invalid-message-content%,%2G-actv-fail-
gaurd-timer-expiry%,%2G-actv-fail-duplicate-activation%,%2G-actv-fail-other-
ongoing-procedure%,%2G-actv-fail-tunnel-deactivation%,%2G-actv-fail-handoff-
before-activate-over%,%2G-actv-fail-detach-before-activate-over%,%2G-actv-fail-
invalid-msg-content%,%inter-system-2G-to-3G-rau-requests%,%inter-system-2G-to-
3G-rau-accepts%,%inter-system-2G-to-3G-comb-rau-requests%,%inter-system-2G-to-
3G-comb-rau-accepts%,%inter-system-2G-to-3G-rau-rejects%,%inter-system-2G-to-3G-
comb-rau-rejects%,%inter-system-2G-to-3G-attach-requests%,%inter-system-2G-to-
3G-attach-accepts%,%inter-system-2G-to-3G-attach-rejects%,%inter-system-2G-to-
3G-comb-attach-requests%
```

#### sgsn schema sgsnSchK format

```
EMS,SGSNK,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%inter-system-2G-to-3G-
comb-attach-accepts%,%inter-system-2G-to-3G-comb-attach-rejects%,%inter-system-
3G-to-2G-rau-requests%,%inter-system-3G-to-2G-rau-accepts%,%inter-system-3G-to-
2G-comb-rau-requests%,%inter-system-3G-to-2G-comb-rau-accepts%,%inter-system-3G-
to-2G-rau-rejects%,%inter-system-3G-to-2G-comb-rau-rejects%,%inter-system-3G-to-
2G-attach-requests%,%inter-system-3G-to-2G-attach-accepts%,%inter-system-3G-to-
2G-attach-rejects%,%inter-system-3G-to-2G-comb-attach-requests%,%inter-system-
3G-to-2G-comb-attach-accepts%,%inter-system-3G-to-2G-comb-attach-rejects%,%3G-
comb-rau-rej-no-cells-in-loc-area%,%2G-comb-rau-rej-no-cells-in-loc-area%,%3G-
comb-rau-rej-msc-not-reachable%,%2G-comb-rau-rej-msc-not-reachable%,%3G-comb-
rau-rej-network-failure%,%2G-comb-rau-rej-network-failure%,%3G-comb-rau-rej-mac-
failure%,%2G-comb-rau-rej-mac-failure%,%3G-comb-rau-rej-syn-failure%,%2G-comb-
rau-rej-syn-failure%,%3G-intra-prau-rej-no-cells-in-loc-area%,%2G-intra-prau-
```

```

rej-no-cells-in-loc-area%,%3G-intra-prau-rej-msc-not-reachable%,%2G-intra-prau-
rej-msc-not-reachable%,%3G-intra-prau-rej-network-failure%,%2G-intra-prau-rej-
network-failure%,%3G-intra-prau-rej-mac-failure%,%2G-intra-prau-rej-mac-
failure%,%3G-intra-prau-rej-syn-failure%,%2G-intra-prau-rej-syn-failure%,%rab-
rej-rab-preempt%,%rab-rej-reloc-overall-tmr-exp%,%rab-rej-reloc-prep-tmr-
exp%,%rab-rej-reloc-complete-tmr-exp%,%rab-rej-queuing-tmr-exp%,%rab-rej-reloc-
triggered%,%ps-inter-rat-rau-total%,%ps-inter-rat-rau-3g%,%ps-inter-rat-rau-
2g%,%comb-inter-rat-rau-total%,%comb-inter-rat-rau-3g%,%comb-inter-rat-rau-
2g%,%ret-ps-inter-rat-rau-total%,%ret-ps-inter-rat-rau-3g%,%ret-ps-inter-rat-
rau-2g%,%ret-comb-inter-rat-rau-total%,%ret-comb-inter-rat-rau-3g%

```

#### sgsn schema sgsnSchL format

```

EMS,SGSNL,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%ret-comb-inter-rat-rau-
2g%,%ps-inter-service-rau-total%,%ps-inter-service-rau-3g%,%ps-inter-service-
rau-2g%,%comb-inter-service-rau-total%,%comb-inter-service-rau-3g%,%comb-inter-
service-rau-2g%,%ret-ps-inter-service-rau-total%,%ret-ps-inter-service-rau-
3g%,%ret-ps-inter-service-rau-2g%,%ret-comb-inter-service-rau-total%,%ret-comb-
inter-service-rau-3g%,%ret-comb-inter-service-rau-2g%,%ps-inter-rat-rau-acc-
total%,%ps-inter-rat-rau-acc-3g%,%ps-inter-rat-rau-acc-2g%,%comb-inter-rat-rau-
acc-total%,%comb-inter-rat-rau-acc-3g%,%comb-inter-rat-rau-acc-2g%,%ret-ps-
inter-rat-rau-acc-total%,%ret-ps-inter-rat-rau-acc-3g%,%ret-ps-inter-rat-rau-
acc-2g%,%ret-comb-inter-rat-rau-acc-total%,%ret-comb-inter-rat-rau-acc-3g%,%ret-
comb-inter-rat-rau-acc-2g%,%ps-inter-service-rau-acc-total%,%ps-inter-service-
rau-acc-3g%,%ps-inter-service-rau-acc-2g%,%comb-inter-service-rau-acc-
total%,%comb-inter-service-rau-acc-3g%,%comb-inter-service-rau-acc-2g%,%ret-ps-
inter-service-rau-acc-total%,%ret-ps-inter-service-rau-acc-3g%,%ret-ps-inter-
service-rau-acc-2g%,%ret-comb-inter-service-rau-acc-total%,%ret-comb-inter-
service-rau-acc-3g%,%ret-comb-inter-service-rau-acc-2g%,%ps-inter-rat-rau-rej-
total%,%ps-inter-rat-rau-rej-3g%,%ps-inter-rat-rau-rej-2g%,%comb-inter-rat-rau-
rej-total%,%comb-inter-rat-rau-rej-3g%,%comb-inter-rat-rau-rej-2g%,%ps-inter-
service-rau-rej-total%,%ps-inter-service-rau-rej-3g%,%ps-inter-service-rau-rej-
2g%,%comb-inter-service-rau-rej-total%,%comb-inter-service-rau-rej-3g%,%comb-
inter-service-rau-rej-2g%,%3G-isrv-ps-rej-imsi-unknown-hlr%,%2G-isrv-ps-rej-
imsi-unknown-hlr%,%3G-isrv-ps-rej-illegal-ms%,%2G-isrv-ps-rej-illegal-ms%,%3G-
isrv-ps-rej-illegal-me%,%2G-isrv-ps-rej-illegal-me%,%3G-isrv-ps-rej-gprs-svc-
not-allow%

```

#### sgsn schema sgsnSchM format

```

EMS,SGSNM,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%2G-isrv-ps-rej-gprs-svc-
not-allow%,%3G-isrv-ps-rej-nongprs-svc-not-allow%,%2G-isrv-ps-rej-nongprs-svc-
not-allow%,%3G-isrv-ps-rej-msid-not-derived-by-nw%,%2G-isrv-ps-rej-msid-not-
derived-by-nw%,%3G-isrv-ps-rej-implicitly-detach%,%2G-isrv-ps-rej-implicitly-
detach%,%3G-isrv-ps-rej-plmn-not-allowed%,%2G-isrv-ps-rej-plmn-not-allowed%,%3G-
isrv-ps-rej-loc-area-not-allowed%,%2G-isrv-ps-rej-loc-area-not-allowed%,%3G-
isrv-ps-rej-roam-not-allowed-larea%,%2G-isrv-ps-rej-roam-not-allowed-larea%,%3G-
isrv-ps-rej-gprs-svc-not-allowed-plmn%,%2G-isrv-ps-rej-gprs-svc-not-allowed-
plmn%,%3G-isrv-ps-rej-no-cells-in-location-area%,%2G-isrv-ps-rej-no-cells-in-
location-area%,%3G-isrv-ps-rej-msc-not-reachable%,%2G-isrv-ps-rej-msc-not-
reachable%,%3G-isrv-ps-rej-network-failure%,%2G-isrv-ps-rej-network-
failure%,%3G-isrv-ps-rej-mac-failure%,%2G-isrv-ps-rej-mac-failure%,%3G-isrv-ps-
rej-syn-failure%,%2G-isrv-ps-rej-syn-failure%,%3G-isrv-ps-rej-congestion%,%2G-
isrv-ps-rej-congestion%,%3G-isrv-ps-rej-gsm-auth-unacceptable%,%2G-isrv-ps-rej-

```

```
gsm-auth-unacceptable%,%3G-isrv-ps-rej-no-pdp-ctx-actv%,%2G-isrv-ps-rej-no-pdp-ctx-actv%,%3G-isrv-ps-rej-retry-from-new-cell%,%2G-isrv-ps-rej-retry-from-new-cell%,%3G-isrv-ps-rej-sem-wrong-msg%,%2G-isrv-ps-rej-sem-wrong-msg%,%3G-isrv-ps-rej-inval-mand-info%,%2G-isrv-ps-rej-inval-mand-info%,%3G-isrv-ps-rej-msg-type-non-exist%,%2G-isrv-ps-rej-msg-type-non-exist%,%3G-isrv-ps-rej-mtype-incompat-pstate%,%2G-isrv-ps-rej-mtype-incompat-pstate%,%3G-isrv-ps-rej-ie-non-existent%,%2G-isrv-ps-rej-ie-non-existent%,%3G-isrv-ps-rej-cond-ie-error%,%2G-isrv-ps-rej-cond-ie-error%,%3G-isrv-ps-rej-msg-not-compat-pstate%,%2G-isrv-ps-rej-msg-not-compat-pstate%,%3G-isrv-ps-rej-prot-error%,%2G-isrv-ps-rej-prot-error%
```

#### sgsn schema sgsnSchN format

```
EMS,SGSNN,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%3G-isrv-ps-rej-unknown-error%,%2G-isrv-ps-rej-unknown-error%,%3G-isrv-comb-rej-imsi-unknown-hlr%,%2G-isrv-comb-rej-imsi-unknown-hlr%,%3G-isrv-comb-rej-illegal-ms%,%2G-isrv-comb-rej-illegal-ms%,%3G-isrv-comb-rej-illegal-me%,%2G-isrv-comb-rej-illegal-me%,%3G-isrv-comb-rej-gprs-svc-not-allow%,%2G-isrv-comb-rej-gprs-svc-not-allow%,%3G-isrv-comb-rej-nongprs-svc-not-allow%,%2G-isrv-comb-rej-nongprs-svc-not-allow%,%3G-isrv-comb-rej-msid-not-derived-by-nw%,%2G-isrv-comb-rej-msid-not-derived-by-nw%,%3G-isrv-comb-rej-implicitly-detach%,%2G-isrv-comb-rej-implicitly-detach%,%3G-isrv-comb-rej-plmn-not-allowed%,%2G-isrv-comb-rej-plmn-not-allowed%,%3G-isrv-comb-rej-loc-area-not-allowed%,%2G-isrv-comb-rej-loc-area-not-allowed%,%3G-isrv-comb-rej-roam-not-allowed-larea%,%2G-isrv-comb-rej-roam-not-allowed-larea%,%3G-isrv-comb-rej-gprs-svc-not-allowed-plmn%,%2G-isrv-comb-rej-gprs-svc-not-allowed-plmn%,%3G-isrv-comb-rej-no-cells-in-location-area%,%2G-isrv-comb-rej-no-cells-in-location-area%,%3G-isrv-comb-rej-msc-not-reachable%,%2G-isrv-comb-rej-msc-not-reachable%,%3G-isrv-comb-rej-network-failure%,%2G-isrv-comb-rej-network-failure%,%3G-isrv-comb-rej-mac-failure%,%2G-isrv-comb-rej-mac-failure%,%3G-isrv-comb-rej-syn-failure%,%2G-isrv-comb-rej-syn-failure%,%3G-isrv-comb-rej-congestion%,%2G-isrv-comb-rej-congestion%,%3G-isrv-comb-rej-gsm-auth-unacceptable%,%2G-isrv-comb-rej-gsm-auth-unacceptable%,%3G-isrv-comb-rej-no-pdp-ctx-actv%,%2G-isrv-comb-rej-no-pdp-ctx-actv%,%3G-isrv-comb-rej-retry-from-new-cell%,%2G-isrv-comb-rej-retry-from-new-cell%,%3G-isrv-comb-rej-sem-wrong-msg%,%2G-isrv-comb-rej-sem-wrong-msg%,%3G-isrv-comb-rej-inval-mand-info%,%2G-isrv-comb-rej-inval-mand-info%,%3G-isrv-comb-rej-msg-type-non-exist%
```

#### sgsn schema sgsnSchO format

```
EMS,SGSNO,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%2G-isrv-comb-rej-msg-type-non-exist%,%3G-isrv-comb-rej-mtype-incompat-pstate%,%2G-isrv-comb-rej-mtype-incompat-pstate%,%3G-isrv-comb-rej-ie-non-existent%,%2G-isrv-comb-rej-ie-non-existent%,%3G-isrv-comb-rej-cond-ie-error%,%2G-isrv-comb-rej-cond-ie-error%,%3G-isrv-comb-rej-msg-not-compat-pstate%,%2G-isrv-comb-rej-msg-not-compat-pstate%,%3G-isrv-comb-rej-prot-error%,%2G-isrv-comb-rej-prot-error%,%3G-isrv-comb-rej-unknown-error%,%2G-isrv-comb-rej-unknown-error%,%3G-isrv-comb-rej-gprs-svc-not-allow%,%2G-isrv-comb-rej-gprs-svc-not-allow%,%3G-isrv-comb-rej-nongprs-svc-not-allow%,%2G-isrv-comb-rej-nongprs-svc-not-allow%,%3G-isrv-comb-rej-msid-not-derived-by-nw%,%2G-isrv-comb-rej-msid-not-derived-by-nw%,%3G-isrv-comb-rej-implicitly-detach%,%2G-isrv-comb-rej-implicitly-detach%,%3G-isrv-comb-rej-plmn-not-allowed%,%2G-isrv-comb-rej-plmn-not-allowed%,%3G-isrv-comb-rej-loc-area-not-allowed%,%2G-isrv-comb-rej-loc-area-not-allowed%,%3G-isrv-comb-rej-roam-not-allowed-larea%,%2G-isrv-comb-rej-roam-not-allowed-larea%,%3G-isrv-comb-rej-gprs-
```

```

svc-not-allowed-plmn%,%2G-irat-comb-rej-gprs-svc-not-allowed-plmn%,%3G-irat-
comb-rej-no-cells-in-location-area%,%2G-irat-comb-rej-no-cells-in-location-
area%,%3G-irat-comb-rej-msc-not-reachable%,%2G-irat-comb-rej-msc-not-
reachable%,%3G-irat-comb-rej-network-failure%,%2G-irat-comb-rej-network-
failure%,%3G-irat-comb-rej-mac-failure%,%2G-irat-comb-rej-mac-failure%,%3G-irat-
comb-rej-syn-failure%,%2G-irat-comb-rej-syn-failure%,%3G-irat-comb-rej-
congestion%,%2G-irat-comb-rej-congestion%,%3G-irat-comb-rej-gsm-auth-
unacceptable%,%2G-irat-comb-rej-gsm-auth-unacceptable%,%3G-irat-comb-rej-no-pdp-
ctx-actv%,%2G-irat-comb-rej-no-pdp-ctx-actv%,%3G-irat-comb-rej-retry-from-new-
cell%

```

sgsn schema sgsnSchP format

```

EMS,SGSNP,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%2G-irat-comb-rej-retry-
from-new-cell%,%3G-irat-comb-rej-sem-wrong-msg%,%2G-irat-comb-rej-sem-wrong-
msg%,%3G-irat-comb-rej-inval-mand-info%,%2G-irat-comb-rej-inval-mand-info%,%3G-
irat-comb-rej-msg-type-non-exist%,%2G-irat-comb-rej-msg-type-non-exist%,%3G-
irat-comb-rej-mtype-incompat-pstate%,%2G-irat-comb-rej-mtype-incompat-
pstate%,%3G-irat-comb-rej-ie-non-existent%,%2G-irat-comb-rej-ie-non-
existent%,%3G-irat-comb-rej-cond-ie-error%,%2G-irat-comb-rej-cond-ie-error%,%3G-
irat-comb-rej-msg-not-compat-pstate%,%2G-irat-comb-rej-msg-not-compat-
pstate%,%3G-irat-comb-rej-prot-error%,%2G-irat-comb-rej-prot-error%,%3G-irat-
comb-rej-unknown-error%,%2G-irat-comb-rej-unknown-error%,%3G-irat-ps-rej-imsi-
unknown-hlr%,%2G-irat-ps-rej-imsi-unknown-hlr%,%3G-irat-ps-rej-illegal-ms%,%2G-
irat-ps-rej-illegal-ms%,%3G-irat-ps-rej-illegal-me%,%2G-irat-ps-rej-illegal-
me%,%3G-irat-ps-rej-gprs-svc-not-allow%,%2G-irat-ps-rej-gprs-svc-not-allow%,%3G-
irat-ps-rej-nongprs-svc-not-allow%,%2G-irat-ps-rej-nongprs-svc-not-allow%,%3G-
irat-ps-rej-msid-not-derived-by-nw%,%2G-irat-ps-rej-msid-not-derived-by-nw%,%3G-
irat-ps-rej-implicitly-detach%,%2G-irat-ps-rej-implicitly-detach%,%3G-irat-ps-
rej-plmn-not-allowed%,%2G-irat-ps-rej-plmn-not-allowed%,%3G-irat-ps-rej-loc-
area-not-allowed%,%2G-irat-ps-rej-loc-area-not-allowed%,%3G-irat-ps-rej-roam-
not-allowed-larea%,%2G-irat-ps-rej-roam-not-allowed-larea%,%3G-irat-ps-rej-gprs-
svc-not-allowed-plmn%,%2G-irat-ps-rej-gprs-svc-not-allowed-plmn%,%3G-irat-ps-
rej-no-cells-in-location-area%,%2G-irat-ps-rej-no-cells-in-location-area%,%3G-
irat-ps-rej-msc-not-reachable%,%2G-irat-ps-rej-msc-not-reachable%,%3G-irat-ps-
rej-network-failure%,%2G-irat-ps-rej-network-failure%,%3G-irat-ps-rej-mac-
failure%

```

sgsn schema sgsnSchQ format

```

EMS,SGSNQ,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%2G-irat-ps-rej-mac-
failure%,%3G-irat-ps-rej-syn-failure%,%2G-irat-ps-rej-syn-failure%,%3G-irat-ps-
rej-congestion%,%2G-irat-ps-rej-congestion%,%3G-irat-ps-rej-gsm-auth-
unacceptable%,%2G-irat-ps-rej-gsm-auth-unacceptable%,%3G-irat-ps-rej-no-pdp-ctx-
actv%,%2G-irat-ps-rej-no-pdp-ctx-actv%,%3G-irat-ps-rej-retry-from-new-cell%,%2G-
irat-ps-rej-retry-from-new-cell%,%3G-irat-ps-rej-sem-wrong-msg%,%2G-irat-ps-rej-
sem-wrong-msg%,%3G-irat-ps-rej-inval-mand-info%,%2G-irat-ps-rej-inval-mand-
info%,%3G-irat-ps-rej-msg-type-non-exist%,%2G-irat-ps-rej-msg-type-non-
exist%,%3G-irat-ps-rej-mtype-incompat-pstate%,%2G-irat-ps-rej-mtype-incompat-
pstate%,%3G-irat-ps-rej-ie-non-existent%,%2G-irat-ps-rej-ie-non-existent%,%3G-
irat-ps-rej-cond-ie-error%,%2G-irat-ps-rej-cond-ie-error%,%3G-irat-ps-rej-msg-
not-compat-pstate%,%2G-irat-ps-rej-msg-not-compat-pstate%,%3G-irat-ps-rej-prot-
error%,%2G-irat-ps-rej-prot-error%,%3G-irat-ps-rej-unknown-error%,%2G-irat-ps-
rej-unknown-error%,%3G-sec-actv-rej-odb%,%2G-sec-actv-rej-odb%,%3G-sec-actv-rej-

```

```
insufficient-resources%,%2G-sec-actv-rej-insufficient-resources%,%3G-sec-actv-
rej-by-ggsn%,%2G-sec-actv-rej-by-ggsn%,%3G-sec-actv-rej-unspecified-error%,%2G-
sec-actv-rej-unspecified-error%,%3G-sec-actv-rej-svc-opt-tmp-out-of-order%,%2G-
sec-actv-rej-svc-opt-tmp-out-of-order%,%3G-sec-actv-rej-semantic-error-tft-
operation%,%2G-sec-actv-rej-semantic-error-tft-operation%,%3G-sec-actv-rej-
syntax-err-in-tft-operation%,%2G-sec-actv-rej-syntax-err-in-tft-operation%,%3G-
sec-actv-rej-unknown-pdp-context%,%2G-sec-actv-rej-unknown-pdp-context%,%3G-sec-
actv-rej-semantic-err-in-pkt-filter%,%2G-sec-actv-rej-semantic-err-in-pkt-
filter%,%3G-sec-actv-rej-syntax-err-in-pkt-filter%,%2G-sec-actv-rej-syntax-err-
in-pkt-filter%
```

sgsn schema sgsnSchR format

```
EMS,SGSNR,%date%,%time%,%vpnname%,%vpnid%,%servname%,%3G-sec-actv-rej-pdp-notft-
actv%,%2G-sec-actv-rej-pdp-notft-actv%,%3G-sec-actv-rej-semantically-
incorrect%,%2G-sec-actv-rej-semantically-incorrect%,%3G-sec-actv-rej-invalid-
mandatory-info%,%2G-sec-actv-rej-invalid-mandatory-info%,%3G-sec-actv-rej-msg-
type-non-existent%,%2G-sec-actv-rej-msg-type-non-existent%,%3G-sec-actv-rej-ie-
non-existent%,%2G-sec-actv-rej-ie-non-existent%,%3G-sec-actv-rej-conditional-ie-
err%,%2G-sec-actv-rej-conditional-ie-err%,%3G-sec-actv-rej-msg-not-compat-prot-
state%,%2G-sec-actv-rej-msg-not-compat-prot-state%,%3G-sec-actv-rej-recovery-on-
timer-expiry%,%2G-sec-actv-rej-recovery-on-timer-expiry%,%3G-sec-actv-rej-prot-
err-unspecified%,%2G-sec-actv-rej-prot-err-unspecified%
```

```
sgtp schema sgtpSch1 format EMS,SGTP,%date%,%time%,%vpn-
name%,%vpn-id%,%service-name%,%sgtpc-cpc-req-v1-pri%,%sgtpc-cpc-req-v0-
pri%,%sgtpc-cpc-req-sec%,%sgtpc-cpc-req-accept%,%sgtpc-cpc-rsp-v1-pri%,%sgtpc-
cpc-rsp-v0-pri%,%sgtpc-cpc-rsp-sec%,%sgtpc-upc-req-v1-tx%,%sgtpc-upc-req-v0-
tx%,%sgtpc-upc-req-v1-rx%,%sgtpc-upc-req-v0-rx%,%sgtpc-upc-req-accept-
tx%,%sgtpc-upc-req-accept-rx%,%sgtpc-dpc-req-v1-tx%,%sgtpc-dpc-req-v0-
tx%,%sgtpc-dpc-req-v1-rx%,%sgtpc-dpc-req-v0-rx%,%sgtpc-dpc-req-accept-
tx%,%sgtpc-dpc-req-accept-rx%,%sgtpc-ident-req-v1-tx%,%sgtpc-ident-req-v0-
tx%,%sgtpc-ident-req-v1-rx%,%sgtpc-ident-req-v0-rx%,%sgtpc-ident-req-accept-
tx%,%sgtpc-ident-req-accept-rx%,%sgtpc-sgsn-ctxt-req-v1-tx%,%sgtpc-sgsn-ctxt-
req-v0-tx%,%sgtpc-sgsn-ctxt-req-v1-rx%,%sgtpc-sgsn-ctxt-req-v0-rx%,%sgtpc-sgsn-
ctxt-req-accept-tx%,%sgtpc-sgsn-ctxt-req-accept-rx%,%sgtpc-sgsn-ctxt-ack-accept-
tx%,%sgtpc-sgsn-ctxt-ack-accept-rx%,%sgtpc-fwd-reloc-req-tx%,%sgtpc-fwd-reloc-
req-rx%,%sgtpc-fwd-reloc-discard-tx%,%sgtpc-fwd-reloc-req-accept-tx%,%sgtpc-fwd-
reloc-req-accept-rx%,%sgtpc-fwd-srnsctxt-req-tx%,%sgtpc-fwd-srnsctxt-req-
rx%,%sgtpc-fwd-srnsctxt-discard-rx%,%sgtpc-fwd-srnsctxt-ack-tx%,%sgtpc-fwd-
srnsctxt-ack-rx%,%sgtpc-fwd-reloc-compl-tx%,%sgtpc-fwd-reloc-compl-rx%,%sgtpc-
reloc-cncl-req-tx%,%sgtpc-reloc-cncl-req-rx%,%sgtpc-reloc-cncl-req-accept-
tx%,%sgtpc-reloc-cncl-req-accept-rx%,%sgtpc-v1-echo-req-tx%,%sgtpc-v1-echo-req-
rx%,%sgtpc-v1-echo-rsp-tx%,%sgtpc-v1-echo-rsp-rx%,%sgtpu-ggsn-pkt-sent%,%sgtpu-
rnc-pkt-sent%,%sgtpu-sgsn-pkt-sent%,%sgtpu-ggsn-pkt-rcvd%,%sgtpu-rnc-pkt-
rcvd%,%sgtpu-sgsn-pkt-rcvd%,%sgtpu-echo-req-tx%,%sgtpu-echo-req-rx%,%sgtpu-echo-
rsp-tx%,%sgtpu-echo-rsp-rx%,%sgtpu-ggsn-errind-sent%,%sgtpu-ggsn-errind-
rcvd%,%sgtpu-rnc-errind-sent%,%sgtpu-rnc-errind-rcvd%,%sgtpu-total-active-
ggsn%,%sgtpu-total-active-rnc%
```

```
sgtp schema sgtpSch2 format EMS,SGTP2,%date%,%time%,%vpn-
name%,%vpn-id%,%service-name%,%sgtpc-total-cpc-req%,%sgtpc-cpc-req-
denied%,%sgtpc-total-upc-req%,%sgtpc-upc-req-denied-tx%,%sgtpc-upc-req-denied-
rx%,%sgtpc-total-dpc-req%,%sgtpc-dpc-req-denied-tx%,%sgtpc-dpc-req-denied-
```

```
rx%,%sgtpc-ident-req-denied-tx%,%sgtpc-ident-req-denied-rx%,%sgtpc-sgsn-ctxt-
req-denied-tx%,%sgtpc-sgsn-ctxt-req-denied-rx%,%sgtpc-sgsn-ctxt-ack-denied-
tx%,%sgtpc-sgsn-ctxt-ack-denied-rx%,%sgtpc-fwd-reloc-denied-tx%,%sgtpc-fwd-
reloc-denied-rx%,%sgtpc-fwd-srnsctxt-ack-denied-tx%,%sgtpc-fwd-srnsctxt-ack-
denied-rx%,%sgtpc-fwd-rel-compl-ack-accept-tx%,%sgtpc-fwd-rel-compl-ack-accept-
rx%,%sgtpc-fwd-rel-compl-ack-denied-tx%,%sgtpc-fwd-rel-compl-ack-denied-
rx%,%sgtpc-reloc-cncl-denied-tx%,%sgtpc-reloc-cncl-denied-rx%,%sgtpc-ver-not-
supported-rx%,%sgtpc-ver-not-supported-tx%,%sgtpc-suppl-extn-hdr-notif-
rx%,%sgtpc-suppl-extn-hdr-notif-tx%,%sgtpu-ggsn-byts-sent%,%sgtpu-rnc-byts-
sent%,%sgtpu-sgsn-byts-sent%,%sgtpu-ggsn-byts-rcvd%,%sgtpu-ggsn-pkt-
queued%,%sgtpu-ggsn-byts-queued%,%sgtpu-ggsn-pkt-queue-full%,%sgtpu-ggsn-byts-
queue-full%,%sgtpu-ggsn-pkt-unkwn-sess%,%sgtpu-ggsn-byts-unkwn-sess%,%sgtpu-
ggsn-pkt-suspended-st%,%sgtpu-ggsn-byts-suspended-st%,%sgtpu-ggsn-pkt-invalid-
msg-length%,%sgtpu-ggsn-byts-invalid-msg-length%,%sgtpu-rnc-byts-rcvd%,%sgtpu-
rnc-pkt-queued%,%sgtpu-rnc-byts-queued%,%sgtpu-rnc-pkt-queue-full%,%sgtpu-rnc-
byts-queue-full%,%sgtpu-rnc-pkt-unkwn-sess%,%sgtpu-rnc-byts-unkwn-sess%,%sgtpu-
rnc-pkt-sess-dealloc%,%sgtpu-rnc-byts-sess-dealloc%,%sgtpu-rnc-pkt-invalid-msg-
length%,%sgtpu-rnc-byts-invalid-msg-length%,%sgtpu-rnc-pkt-source-ip-
viol%,%sgtpu-rnc-byts-source-ip-viol%,%sgtpu-sgsn-byts-rcvd%,%sgtpu-sgsn-pkt-
queued%,%sgtpu-sgsn-byts-queued%,%sgtpu-sgsn-pkt-queue-full%,%sgtpu-sgsn-byts-
queue-full%
```

```
sgtp schema sgtpSch3 format EMS,SGTP3,%date%,%time%,%vpn-
name%,%vpn-id%,%service-name%,%sgtpu-sgsn-pkt-unkwn-sess%,%sgtpu-sgsn-byts-
unkwn-sess%,%sgtpu-sgsn-pkt-iu-release%,%sgtpu-sgsn-byts-iu-release%,%sgtpu-
sgsn-pkt-invalid-msg-length%,%sgtpu-sgsn-byts-invalid-msg-length%,%sgtpc-v0-
echo-req-tx%,%sgtpc-v0-echo-req-rx%,%sgtpc-v0-echo-rsp-tx%,%sgtpc-v0-echo-rsp-
rx%,%sgtpu-ggsn-pkt-sess-dealloc%,%sgtpu-ggsn-byts-sess-dealloc%,%sgtpu-ggsn-
pkt-page-fail%,%sgtpu-ggsn-byts-page-fail%,%sgtpu-ggsn-pkt-v0-seq-num-nt-
pres%,%sgtpu-ggsn-byts-v0-seq-num-nt-pres%,%sgtpu-rnc-pkt-rau-in-active-
st%,%sgtpu-rnc-byts-rau_in_active-st%,%sgtpu-rnc-pkt-reg_in_rau%,%sgtpu-rnc-
byts-reg_in_rau%,%sgtpu-rnc-pkt-suspended-st%,%sgtpu-rnc-byts-suspended-
st%,%sgtpu-sgsn-pkt-inconsistent-tunnel-state%,%sgtpu-sgsn-byts-inconsistent-
tunnel-state%,%sgtpu-sgsn-pkt-sess-dealloc%,%sgtpu-sgsn-byts-sess-
dealloc%,%sgtpu-total-ggsn-pkt-drop%,%sgtpu-total-ggsn-byts-drop%,%sgtpu-total-
sgsn-pkt-drop%,%sgtpu-total-sgsn-byts-drop%,%sgtpu-total-rnc-pkt-drop%,%sgtpu-
total-rnc-byts-drop%,%sgtpu-ggsn-pkt-drop-suspend-dealloc-st%,%sgtpu-ggsn-byts-
drop-suspend-dealloc-st%,%sgtpu-rnc-pkt-rau-in-active-reg-st%,%sgtpu-rnc-byts-
rau_in_active-reg-st%,%sgtpu-rnc-pkt-drop-suspended-dealloc-st%,%sgtpu-rnc-byts-
drop-suspended-dealloc-st%,%sgtpu-total-pkt-ctxt-preserved%,%sgtpu-total-byts-
ctxt-preserved%,%sgtpc-paket-discarded%,%sgtpc-v1-retrnas-echo-req-tx%,%sgtpc-
v0-retrnas-echo-req-tx%,%sgtpu-errors-payload-length-mismatch%,%sgtpu-rnc-byts-
unknown-version%,%sgtpu-rnc-pkt-unknown-version%,%sgtpu-ggsn-byts-unknown-
version%,%sgtpu-sgsn-byts-unknown-version%,%sgtpu-ggsn-pkt-unknown-
version%,%sgtpu-sgsn-pkt-unknown-version%,%iups-service%,%rnc-address%,%ggsn-
address%
```

```
sgtp schema sgtpSch4 format EMS,SGTP4,%date%,%time%,%vpn-
name%,%vpn-id%,%service-name%,%sgtpu-v1-echo-req-tx%,%sgtpu-v0-echo-req-
tx%,%sgtpu-v1-echo-req-rx%,%sgtpu-v0-echo-req-rx%,%sgtpu-v1-echo-rsp-tx%,%sgtpu-
v0-echo-rsp-tx%,%sgtpu-v1-echo-rsp-rx%,%sgtpu-v0-echo-rsp-rx%,%sgtpu-v1-echo-
req-retrans%,%sgtpu-v0-echo-req-retrans%,%sgtpu-sgsn-unknown-errind%,%sgtpu-
```

```
sgsn-unsolicited-data-pkt%,%sgtpu-sgsn-err-ind-for-unsolicited-pkt%,%sgtpu-ggsn-
pkt-traffic-policing%,%sgtpu-ggsn-byts-traffic-policing%,%sgtpu-rnc-pkt-traffic-
policing%,%sgtpu-rnc-byts-traffic-policing%,%sgtpc-upc-req-accept-v1-tx%,%sgtpc-
upc-req-accept-v1-rx%,%sgtpc-upc-req-accept-v0-rx%,%sgtpc-dpc-req-accept-v1-
tx%,%sgtpc-dpc-req-accept-v0-tx%,%sgtpc-dpc-req-accept-v1-rx%,%sgtpc-dpc-req-
accept-v0-rx%,%sgtpc-ident-req-accept-v1-tx%,%sgtpc-ident-req-accept-v0-
tx%,%sgtpc-ident-req-accept-v1-rx%,%sgtpc-ident-req-accept-v0-rx%,%sgtpc-sgsn-
ctxt-req-accept-v1-tx%,%sgtpc-sgsn-ctxt-req-accept-v0-tx%,%sgtpc-sgsn-ctxt-req-
accept-v1-rx%,%sgtpc-sgsn-ctxt-req-accept-v0-rx%,%sgtpc-sgsn-ctxt-ack-accept-v1-
tx%,%sgtpc-sgsn-ctxt-ack-accept-v0-tx%,%sgtpc-sgsn-ctxt-ack-accept-
v1_rx%,%sgtpc-sgsn-ctxt-ack-accept-v0_rx%
```

```
sccp schema sccpSch1 format EMS,SCCP,%date%,%time%,%sccp-nw-
id%,%ssa-txed%,%ss-oos-grant-txed%,%ss-oos-req-txed%,%ssp-txed%,%ss-status-test-
txed%,%ssa-rcvd%,%ss-oos-grant-rcvd%,%ss-oos-req-rcvd%,%ss-prohibit-rcvd%,%ss-
status-test-rcvd%,%ss-congested-txed%,%ss-congested-rcvd%,%sccp-rtf-notrans-
addr-nature%,%sccp-rtf-notrans-addr-specific%,%sccp-rtf-netwfail-pc-
unavail%,%sccp-rtf-netw-conges%,%sccp-rtf-ssn-fail%,%sccp-rtf-ssn-conges%,%sccp-
syntax-error%,%sccp-reassem-err-timer%,%sccp-reassem-err-sequence%,%sccp-
reassem-err-space%,%sccp-hop-counter-violation%,%sccp-provider-ini-reset%,%sccp-
provider-ini-rel%,%sccp-msg-toolarge-segment%,%sccp-segmentation-fail%,%sccp-
total-msgs-handled%,%sccp-total-msgs-handl-local-ss%,%sccp-total-msgs-req-
gtd%,%sccp-udt-sent%,%sccp-udt-rcvd%,%sccp-udts-sent%,%sccp-udts-rcvd%,%sccp-
xudt-sent%,%sccp-xudt-rcvd%,%sccp-xudts-sent%,%sccp-xudts-rcvd%,%sccp-ludt-
sent%,%sccp-ludt-rcvd%,%sccp-ludts-sent%,%sccp-ludts-rcvd%,%sccp-cr-sent%,%sccp-
cr-rcvd%,%sccp-cc-sent%,%sccp-cc-rcvd%,%sccp-cref-sent%,%sccp-cref-rcvd%,%sccp-
rsr-msg-sent%,%sccp-rsr-msg-rcvd%,%sccp-err-msg-sent%,%sccp-err-msg-rcvd%,%sccp-
unequipped-user%,%sccp-reason-unknown%,%sccp-class-0-sent%,%sccp-class-0-
rcvd%,%sccp-class-1-sent%,%sccp-class-1-rcvd%,%sccp-DT1-sent%,%sccp-DT1-
rcvd%,%sccp-rel-compl-supv-fail%,%sccp-rel-disconn-req-rx%,%sccp-routing-fail-
invalid-ins-routing-req%,%sccp-routing-fail-invalid-isni-routing-req%,%sccp-
routing-fail-isni-constrained-routing%,%sccp-routing-fail-redundant-isni-
routing-req%,%sccp-routing-fail-isni-identify-network%,%sccp-inactivity-rcv-tmr-
expired%,%sccp-inactivity-test-sent%,%sccp-inactivity-test-received%,%sccp-
congested-msg-rcvd%,%sccp-prohibit-msg-rcvd%
```

```
ss7rd schema ss7rdSch1 format EMS,SS7RD1,%date%,%time%,%ss7rd-
number%,%ss7rd-asp_instance%,%ss7rd-sctp-init-tx%,%ss7rd-sctp-init-rtx%,%ss7rd-
sctp-init-rx%,%ss7rd-sctp-init-ack-tx%,%ss7rd-sctp-init-ack-rx%,%ss7rd-sctp-
shutdown-tx%,%ss7rd-sctp-shutdown-rtx%,%ss7rd-sctp-shutdown-rx%,%ss7rd-sctp-
shutdown-ack-tx%,%ss7rd-sctp-shutdown-ack-rtx%,%ss7rd-sctp-shutdown-ack-
rx%,%ss7rd-sctp-cookie-tx%,%ss7rd-sctp-cookie-rtx%,%ss7rd-sctp-cookie-
rx%,%ss7rd-sctp-cookie-ack-tx%,%ss7rd-sctp-cookie-ack-rx%,%ss7rd-sctp-data-
tx%,%ss7rd-sctp-data-rtx%,%ss7rd-sctp-data-rx%,%ss7rd-sctp-sack-tx%,%ss7rd-sctp-
sack-rx%,%ss7rd-sctp-shutdown-compl-tx%,%ss7rd-sctp-shutdown-compl-rx%,%ss7rd-
sctp-heartbeat-tx%,%ss7rd-sctp-heartbeat-rx%,%ss7rd-sctp-heartbeat-ack-
tx%,%ss7rd-sctp-heartbeat-ack-rx%,%ss7rd-sctp-abort-tx%,%ss7rd-sctp-abort-
rx%,%ss7rd-sctp-bytes-tx%,%ss7rd-sctp-bytes-rx%,%ss7rd-mtp3-data-tx%,%ss7rd-
mtp3-paused-tx%,%ss7rd-mtp3-resumed-tx%,%ss7rd-mtp3-congest-tx%,%ss7rd-mtp3-
restrict-tx%,%ss7rd-mtp3-reset-begin-tx%,%ss7rd-mtp3-reset-end-tx%,%ss7rd-mtp3-
reset-upu-tx%,%ss7rd-mtp3-data-rx%,%ss7rd-mtp3-paused-rx%,%ss7rd-mtp3-resumed-
rx%,%ss7rd-mtp3-congest-rx%,%ss7rd-mtp3-restrict-rx%,%ss7rd-mtp3-reset-begin-
```

```
rx%,%ss7rd-mtp3-reset-end-rx%,%ss7rd-mtp3-reset-upu-rx%,%ss7rd-m3ua-data-
tx%,%ss7rd-m3ua-duna-tx%,%ss7rd-m3ua-dava-tx%,%ss7rd-m3ua-daud-tx%,%ss7rd-m3ua-
scon-tx%,%ss7rd-m3ua-dupu-tx%,%ss7rd-m3ua-drst-tx%,%ss7rd-m3ua-regreq-
tx%,%ss7rd-m3ua-regrsp-tx%,%ss7rd-m3ua-deregreq-tx%,%ss7rd-m3ua-deregrsp-
tx%,%ss7rd-m3ua-aspup-tx%,%ss7rd-m3ua-aspup-ack-tx%,%ss7rd-m3ua-aspdn-
tx%,%ss7rd-m3ua-aspdn-ack-tx%,%ss7rd-m3ua-aspac-tx%,%ss7rd-m3ua-aspac-ack-
tx%,%ss7rd-m3ua-aspia-tx%,%ss7rd-m3ua-aspia-ack-tx%,%ss7rd-m3ua-hearbeat-
tx%,%ss7rd-m3ua-hearbeat-ack-tx%,%ss7rd-m3ua-error-tx%,%ss7rd-m3ua-notify-
tx%,%ss7rd-m3ua-data-rx%
```

```
ss7rd schema ss7rdSch2 format EMS,SS7RD2,%date%,%time%,%ss7rd-
number%,%ss7rd-asp_instance%,%ss7rd-m3ua-duna-rx%,%ss7rd-m3ua-dava-rx%,%ss7rd-
m3ua-daud-rx%,%ss7rd-m3ua-scon-rx%,%ss7rd-m3ua-dupu-rx%,%ss7rd-m3ua-drst-
rx%,%ss7rd-m3ua-regreq-rx%,%ss7rd-m3ua-regrsp-rx%,%ss7rd-m3ua-deregreq-
rx%,%ss7rd-m3ua-deregrsp-rx%,%ss7rd-m3ua-aspup-rx%,%ss7rd-m3ua-aspup-ack-
rx%,%ss7rd-m3ua-aspdn-rx%,%ss7rd-m3ua-aspdn-ack-rx%,%ss7rd-m3ua-aspac-
rx%,%ss7rd-m3ua-aspac-ack-rx%,%ss7rd-m3ua-aspia-rx%,%ss7rd-m3ua-aspia-ack-
rx%,%ss7rd-m3ua-hearbeat-rx%,%ss7rd-m3ua-hearbeat-ack-rx%,%ss7rd-m3ua-error-
rx%,%ss7rd-m3ua-notify-rx%,%ss7rd-m3ua-lower-intf-pdu-tx%,%ss7rd-m3ua-lower-
intf-pdu-rx%,%ss7rd-m3ua-upper-intf-pdu-tx%,%ss7rd-m3ua-upper-intf-pdu-
rx%,%ss7rd-m3ua-down-no-route-found%,%ss7rd-m3ua-down-pc-unavailable%,%ss7rd-
m3ua-down-msg-failed%,%ss7rd-m3ua-down-loadshare-failed%,%ss7rd-m3ua-up-no-
route-found%,%ss7rd-m3ua-up-pc-unavailable%,%ss7rd-m3ua-up-msg-failed%,%ss7rd-
m3ua-up-loadshare-failed%,%ss7rd-sctp-error-tx%,%ss7rd-sctp-error-rx%,%ss7rd-
m3ua-lower-intf-pdusize-tx%,%ss7rd-m3ua-lower-intf-pdusize-rx%,%ss7rd-m3ua-
upper-intf-pdusize-tx%,%ss7rd-m3ua-upper-intf-pdusize-rx%,%ss7rd-m3ua-down-pc-
congested%,%ss7rd-m3ua-down-no-psp-avail%,%ss7rd-m3ua-down-no-nsap-
avail%,%ss7rd-m3ua-down-data-conges-q%,%ss7rd-m3ua-down-data-as-pend-q%,%ss7rd-
m3ua-up-pc-congested%,%ss7rd-m3ua-up-no-psp-avail%,%ss7rd-m3ua-up-no-nsap-
avail%,%ss7rd-m3ua-up-data-conges-q%,%ss7rd-m3ua-up-data-as-pend-q%,%ss7rd-mtp3-
user-part-unavail-tx%,%ss7rd-mtp3-traffic-restart-allowed-tx%,%ss7rd-mtp3-
traffic-restart-waiting-tx%,%ss7rd-mtp3-user-part-unavail-rx%,%ss7rd-mtp3-
traffic-restart-allowed-rx%,%ss7rd-mtp3-traffic-restart-waiting-rx%,%ss7rd-mtp3-
msu-dropped-routing-err%
```

```
ss7rd schema ss7rdSch3 format EMS,SS7RD3,%date%,%time%,%ss7rd-
number%,%ss7rd-asp_instance%,%ss7rd-m3ua-psp-ps-id%,%ss7rd-m3ua-psp-
instance%,%ss7rd-adjacent-point-code%,%ss7rd-adjacent-spc-not-accessible%,%ss7rd-
m3ua-psp-aspac-ack-rx%,%ss7rd-m3ua-psp-aspac-ack-tx%,%ss7rd-m3ua-psp-aspac-
rx%,%ss7rd-m3ua-psp-aspac-tx%,%ss7rd-m3ua-psp-aspdn-ack-rx%,%ss7rd-m3ua-psp-
aspdn-ack-tx%,%ss7rd-m3ua-psp-aspdn-rx%,%ss7rd-m3ua-psp-aspdn-tx%,%ss7rd-m3ua-
psp-aspia-ack-rx%,%ss7rd-m3ua-psp-aspia-ack-tx%,%ss7rd-m3ua-psp-aspia-
rx%,%ss7rd-m3ua-psp-aspia-tx%,%ss7rd-m3ua-psp-aspup-ack-rx%,%ss7rd-m3ua-psp-
aspup-ack-tx%,%ss7rd-m3ua-psp-aspup-rx%,%ss7rd-m3ua-psp-aspup-tx%,%ss7rd-m3ua-
psp-congestion-count%,%ss7rd-m3ua-psp-congestion-duration%,%ss7rd-m3ua-psp-
congestion-level1%,%ss7rd-m3ua-psp-congestion-level2%,%ss7rd-m3ua-psp-
congestion-level3%,%ss7rd-m3ua-psp-congestion-queue-hw%,%ss7rd-m3ua-psp-
congestion-queue-size%,%ss7rd-m3ua-psp-data-pdu-rx%,%ss7rd-m3ua-psp-data-
pdusize-rx%,%ss7rd-m3ua-psp-data-pdusize-tx%,%ss7rd-m3ua-psp-data-pdu-
tx%,%ss7rd-m3ua-psp-data-rx%,%ss7rd-m3ua-psp-data-tx%,%ss7rd-m3ua-psp-daud-
rx%,%ss7rd-m3ua-psp-daud-tx%,%ss7rd-m3ua-psp-dava-rx%,%ss7rd-m3ua-psp-dava-
tx%,%ss7rd-m3ua-psp-deregreq-rx%,%ss7rd-m3ua-psp-deregreq-tx%,%ss7rd-m3ua-psp-
```

```
deregrsp-rx%,%ss7rd-m3ua-psp-deregrsp-tx%,%ss7rd-m3ua-psp-drst-rx%,%ss7rd-m3ua-psp-drst-tx%,%ss7rd-m3ua-psp-duna-rx%,%ss7rd-m3ua-psp-duna-tx%,%ss7rd-m3ua-psp-dupu-rx%,%ss7rd-m3ua-psp-dupu-tx%,%ss7rd-m3ua-psp-error-rx%,%ss7rd-m3ua-psp-error-tx%,%ss7rd-m3ua-psp-hearbeat-ack-rx%,%ss7rd-m3ua-psp-hearbeat-ack-tx%,%ss7rd-m3ua-psp-hearbeat-rx%,%ss7rd-m3ua-psp-hearbeat-tx%,%ss7rd-m3ua-psp-notify-rx%,%ss7rd-m3ua-psp-notify-tx%,%ss7rd-m3ua-psp-regreq-rx%,%ss7rd-m3ua-psp-regreq-tx%,%ss7rd-m3ua-psp-regrsp-rx%,%ss7rd-m3ua-psp-regrsp-tx%,%ss7rd-m3ua-psp-scon-rx%
```

```
ss7rd schema ss7rdSch4 format EMS,SS7RD4,%date%,%time%,%ss7rd-number%,%ss7rd-asp_instance%,%ss7rd-m3ua-psp-scon-tx%,%ss7rd-m3ua-psp-unavailable-count%,%ss7rd-m3ua-psp-unavailable-duration%,%ss7rd-m3ua-psp-up-data-as-pend-q%,%ss7rd-m3ua-psp-up-data-conges-q%,%ss7rd-m3ua-psp-up-loadshare-failed%,%ss7rd-m3ua-psp-up-msg-failed%,%ss7rd-m3ua-psp-up-no-nsap-avail%,%ss7rd-m3ua-psp-up-no-psp-avail%,%ss7rd-m3ua-psp-up-no-route-found%,%ss7rd-m3ua-psp-up-pc-congested%,%ss7rd-m3ua-psp-up-pc-unavailable%
```

```
mip6ha schema mip6haSch1 format
EMS,MIPV6HA,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%num-subscriber%,%aaa-attempt%,%aaa-success%,%aaa-totfail%,%aaa-actauthfail%,%aaa-misauthfail%,%bindupdrec-totrec%,%bindupdrec-totacc%,%bindupdrec-totdeny%,%bindupdrec-totdisc%,%bindupdrec-totcongdisc%,%ibindupdreq-receive%,%ibindupdreq-accept%,%ibindupdreq-deny%,%rbindupdreq-receive%,%rbindupdreq-accept%,%rbindupdreq-deny%,%deregreq-receive%,%deregreq-accept%,%deregreq-deny%,%horeq-receive%,%horeq-accept%,%horeq-deny%,%bindacksent-total%,%bindacksent-acceptreg%,%bindacksent-acceptdereg%,%bindacksent-deny%,%denyreason-badreq%,%denyreason-mismatchid%,%denyreason-mnauthfail%,%denyreason-admprohibit%,%denyreason-noresource%,%denyreason-simbindexceed%,%denyreason-senderror%,%denyreason-unspereason%,%denyreason-msgidrequire%,%denyreason-dadfail%,%denyreason-nothomesubnet%,%denyreason-seqoutwindow%,%denyreason-regchadisallow%,%rrqdeny-admprohibit%,%rrqdeny-unknownha%,%datareceive-totpkt%,%datareceive-totpkt6in6%,%datareceive-totbyte%,%datareceive-totbyte6in6%,%datareceive-errorprotocol%,%datareceive-errorinvpkt%,%datareceive-errornosess%,%datasent-totpkt%,%datasent-totpkt6in6%,%datasent-totbyte%,%datasent-totbyte6in6%,%disconnect-lifetimeexp%,%disconnect-deregistration%,%disconnect-admdrop%,%disconnect-othreason%,%icmpv6-toobigreceive%,%icmpv6-toobigforward%,%icmpv6-toobiggenerate%
```

```
context schema contextSch1 format
EMS,CONTEXT,%date%,%time%,%vpnnname%,%vpnid%,%sfw-total-rxpackets%,%sfw-total-rxbytes%,%sfw-total-txpackets%,%sfw-total-txbytes%,%sfw-total-injectedpkts%,%sfw-total-injectedbytes%,%sfw-dnlkn-dropkts%,%sfw-dnlkn-dropbytes%,%sfw-uplnk-dropkts%,%sfw-uplnk-dropbytes%,%sfw-total-malpackets%,%sfw-ip-discardpackets%,%sfw-ip-malpackets%,%sfw-icmp-discardpackets%,%sfw-icmp-malpackets%,%sfw-tcp-discardpackets%,%sfw-tcp-malpackets%,%sfw-udp-discardpackets%,%sfw-udp-malpackets%,%sfw-total-dosattacks%,%sfw-total-flows%,%dns-primary-ns-a-atmpts%,%dns-primary-ns-a-fails%,%dns-primary-ns-a-succs%,%dns-primary-ns-aaaa-atmpts%,%dns-primary-ns-aaaa-fails%,%dns-primary-ns-aaaa-succs%,%dns-primary-ns-naptr-atmpts%,%dns-primary-ns-naptr-fails%,%dns-primary-ns-naptr-succs%,%dns-primary-ns-srv-atmpts%,%dns-primary-ns-srv-fails%,%dns-primary-ns-srv-succs%,%dns-secondary-ns-a-atmpts%,%dns-secondary-ns-a-fails%,%dns-secondary-ns-a-succs%,%dns-secondary-
```

```
ns-aaaa-atmpts%,%dns-secondary-ns-aaaa-fails%,%dns-secondary-ns-aaaa-
succs%,%dns-secondary-ns-naptr-atmpts%,%dns-secondary-ns-naptr-fails%,%dns-
secondary-ns-naptr-succs%,%dns-secondary-ns-srv-atmpts%,%dns-secondary-ns-srv-
fails%,%dns-secondary-ns-srv-succs%,%bgp-maxroute%,%bgp-totroute%
```

#### cscf schema cscfSch1 format

```
EMS,CSCF1,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%curregusers%,%faile
dauth%,%regex%,%callattrx%,%callatttx%,%callsuccrx%,%callsucctx%,%callfailrx%,%
callfailtx%,%curcscfsess%,%callrejpdf%,%callrejloc%,%sesstimeexp%,%hssacc%,%emer
gcalls%,%tollfreecalls%,%premservcalls%,%internationalcalls%,%longDistancecalls%
,%opassistcalls%,%dirassistcalls%,%regregrx%,%regrectx%,%invregrx%,%invrectx%,%a
ckregrx%,%ackrectx%,%byeregrx%,%byerectx%,%cancregrx%,%cancrectx%,%optregrx%,%op
trectx%,%prackregrx%,%prackrectx%,%subregrx%,%subrectx%,%notregrx%,%notrectx%,%r
efregrx%,%refrectx%,%inforegrx%,%inforectx%,%updregrx%,%updrectx%,%msgregrx%,%ms
grectx%,%pubregrx%,%pubrectx%,%trysprx%,%trysptx%,%rngrsprx%,%rngrsptx%,%fwdrs
prx%,%fwdrsptx%,%quersprx%,%quersptx%,%prgrsprx%,%prgrsptx%,%200-regrsprx%,%200-
regrsptx%,%200-invrsprix%,%200-invrsprix%,%200-byersprx%,%200-byersptx%,%200-
cnlrsprx%,%200-cnlrsptx%,%200-optrsprx%,%200-optrsptx%,%200-prackrsprx%,%200-
prackrsptx%,%200-subrsprx%,%200-subrsptx%,%200-notrsprx%,%200-notrsptx%,%200-
infrsprx%,%200-infrsptx%,%200-updrsprx%,%200-updrsptx%,%200-pubrsprx%,%200-
pubrsptx%,%200-refrsprx%,%200-refrsptx%,%200-msgrsprx%,%200-msgrsptx%,%202-
refrsprx%,%202-refrsptx%,%202-subrsprx%,%202-
subrsptx%,%mchrsprx%,%mchrsptx%,%mpersprx%,%mpersptx%,%mtersprx%,%mtersptx%,%upx
rsprx%,%upxrsptx%,%altrsprx%,%altrsptx%,%brqerrrx%,%brqerrtx%,%uauerrrx%,%uauerr
tx%,%forerrrx%,%forerrtx%,%nfderrrx%,%nfderrtx%,%mnaerrrx%,%mnaerrtx%,%nac406err
rx%,%nac406errtx%,%parerrrx%,%parerrtx%,%rtoerrrx%,%rtoerrtx%,%gonerrrx%,%gonerr
tx%,%crferrrx%,%crferrtx%,%relerrrx%,%relerrtx%,%rulerrrx%,%rulerrtx%,%umterrrx%
,%umterrtx%,%uuserrrx%,%uuserrtx%,%bexerrrx%,%bexerrtx%,%exrerrrx%,%exrerrtx%,%i
tberrrx%,%itberrtx%,%tnaerrrx%,%tnaerrtx%,%tdnerrrx%,%tdnerrtx%,%ldterrrx%,%ldte
rrtx%
```

#### cscf schema cscfSch2 format

```
EMS,CSCF2,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%tmherrrx%,%tmherrtx
%,%adierrrx%,%adierrtx%,%amberrrx%,%amberrtx%,%bhrerrrx%,%bhrerrtx%,%rqcerrrx%,%
rqcerrtx%,%namerrrx%,%namerrtx%,%trperrrx%,%trperrtx%,%udperrrx%,%udperrtx%,%ine
errrx%,%ineerrtx%,%nimerrrx%,%nimerrtx%,%bgterrxx%,%bgterrtx%,%suaerrrx%,%suaerr
tx%,%gtterrxx%,%gtterrtx%,%bsverrrx%,%bsverrtx%,%mtlerrrx%,%mtlerrtx%,%pcferrrx%
,%pcferrtx%,%bewerrrx%,%bewerrtx%,%decerrrx%,%decerrtx%,%neaerrrx%,%neaerrtx%,%n
ac606errrx%,%nac606errtx%,%callsetuptime%,%callscounted%,%sec-rereg%,%sec-
dereg%,%sec-assoc-rejects%,%sub-with-sec-conn%,%sub-with-unsec-conn%,%dereg-
attrx%,%dereg-atttx%,%dereg-succrx%,%dereg-succtx%,%dereg-failrx%,%dereg-
failtx%,%dereg-resp-401rx%,%dereg-resp-401tx%,%dereg-resp-403rx%,%dereg-resp-
403tx%,%dereg-resp-404rx%,%dereg-resp-404tx%,%dereg-resp-420rx%,%dereg-resp-
420tx%,%dereg-resp-500rx%,%dereg-resp-500tx%,%reg-attrx%,%reg-atttx%,%reg-
succrx%,%reg-succtx%,%reg-failrx%,%reg-failtx%,%reg-resp-401rx%,%reg-resp-
401tx%,%reg-resp-403rx%,%reg-resp-403tx%,%reg-resp-404rx%,%reg-resp-404tx%,%reg-
resp-420rx%,%reg-resp-420tx%,%reg-resp-500rx%,%reg-resp-500tx%,%rereg-
attrx%,%rereg-atttx%,%rereg-succrx%,%rereg-succtx%,%rereg-failrx%,%rereg-
failtx%,%rereg-resp-401rx%,%rereg-resp-401tx%,%rereg-resp-403rx%,%rereg-resp-
403tx%,%rereg-resp-404rx%,%rereg-resp-404tx%,%rereg-resp-420rx%,%rereg-resp-
420tx%,%rereg-resp-500rx%,%rereg-resp-500tx%,%call-rel-attrx%,%call-rel-
atttx%,%call-rel-succrx%,%call-rel-succtx%,%call-rel-failrx%,%call-rel-
```

```
failtx%,%rtp-sent%,%rtp-recv%,%min-invite-proc-time%,%max-invite-proc-
time%,%min-first-resp-time%,%max-first-resp-time%,%min-post-dial-delay%,%max-
post-dial-delay%,%min-session-setup-delay%
```

```
cscf schema cscfSch3 format
```

```
EMS,CSCF3,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%max-session-setup-
delay%,%min-post-answer-delay%,%max-post-answer-delay%,%min-session-rel-
delay%,%max-session-rel-
delay%,%prerrrrx%,%prerrrtx%,%conferrrrx%,%conferrrtx%,%lrerrrrx%,%lrerrrtx%,%blierrrrx
%,%blierrrtx%,%beerrrrx%,%beerrrtx%,%sarerrrrx%,%sarerrrtx%,%tot-sip-invalid-msgs-
rx%,%tot-sip-msgs-rx%,%tot-sip-msgs-
tx%,%regreqretx%,%invreqretx%,%byereqretx%,%cancreqretx%,%active-tcp-
conn%,%closed-tcp-conn%,%succ-tcp-conn-out%,%fail-tcp-conn-out%,%succ-tcp-conn-
in%,%fail-tcp-conn-in%,%reg-rejdueto-secagree%,%reg-rejdueto-
algomismatch%,%ipsec-pktrx%,%ipsec-pkttx%,%ipsec-octrx%,%ipsec-octtx%,%msg-
drops-duetoerror%,%msgs-withincorr-sec-verify%,%msgsum-subs-attrx%,%msgsum-subs-
atttx%,%msgsum-subs-succrx%,%msgsum-subs-succtx%,%msgsum-subs-failrx%,%msgsum-
subs-failtx%,%msgsum-subs-resp-200rx%,%msgsum-subs-resp-200tx%,%msgsum-subs-
resp-202rx%,%msgsum-subs-resp-202tx%,%msgsum-subs-resp-400rx%,%msgsum-subs-resp-
400tx%,%msgsum-subs-resp-403rx%,%msgsum-subs-resp-403tx%,%msgsum-subs-resp-
481rx%,%msgsum-subs-resp-481tx%,%msgsum-subs-resp-489rx%,%msgsum-subs-resp-
489tx%,%msgsum-subs-resp-500rx%,%msgsum-subs-resp-500tx%,%msgsum-subs-resp-
3xxrx%,%msgsum-subs-resp-3xxtx%,%msgsum-subs-resp-4xxrx%,%msgsum-subs-resp-
4xxtx%,%msgsum-subs-resp-5xxrx%,%msgsum-subs-resp-5xxtx%,%msgsum-subs-resp-
6xxrx%,%msgsum-subs-resp-6xxtx%,%msgsum-resubs-attrx%,%msgsum-resubs-
atttx%,%msgsum-resubs-succrx%,%msgsum-resubs-succtx%,%msgsum-resubs-
failrx%,%msgsum-resubs-failtx%,%msgsum-resubs-resp-200rx%,%msgsum-resubs-resp-
200tx%,%msgsum-resubs-resp-202rx%,%msgsum-resubs-resp-202tx%,%msgsum-resubs-
resp-400rx%,%msgsum-resubs-resp-400tx%,%msgsum-resubs-resp-403rx%,%msgsum-
resubs-resp-403tx%
```

```
cscf schema cscfSch4 format
```

```
EMS,CSCF4,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%msgsum-resubs-resp-
481rx%,%msgsum-resubs-resp-481tx%,%msgsum-resubs-resp-489rx%,%msgsum-resubs-
resp-489tx%,%msgsum-resubs-resp-500rx%,%msgsum-resubs-resp-500tx%,%msgsum-
resubs-resp-3xxrx%,%msgsum-resubs-resp-3xxtx%,%msgsum-resubs-resp-
4xxrx%,%msgsum-resubs-resp-4xxtx%,%msgsum-resubs-resp-5xxrx%,%msgsum-resubs-
resp-5xxtx%,%msgsum-resubs-resp-6xxrx%,%msgsum-resubs-resp-6xxtx%,%msgsum-
unsubs-attrx%,%msgsum-unsubs-atttx%,%msgsum-unsubs-succrx%,%msgsum-unsubs-
succtx%,%msgsum-unsubs-failrx%,%msgsum-unsubs-failtx%,%msgsum-unsubs-resp-
200rx%,%msgsum-unsubs-resp-200tx%,%msgsum-unsubs-resp-202rx%,%msgsum-unsubs-
resp-202tx%,%msgsum-unsubs-resp-400rx%,%msgsum-unsubs-resp-400tx%,%msgsum-
unsubs-resp-403rx%,%msgsum-unsubs-resp-403tx%,%msgsum-unsubs-resp-
481rx%,%msgsum-unsubs-resp-481tx%,%msgsum-unsubs-resp-489rx%,%msgsum-unsubs-
resp-489tx%,%msgsum-unsubs-resp-500rx%,%msgsum-unsubs-resp-500tx%,%msgsum-
unsubs-resp-3xxrx%,%msgsum-unsubs-resp-3xxtx%,%msgsum-unsubs-resp-
4xxrx%,%msgsum-unsubs-resp-4xxtx%,%msgsum-unsubs-resp-5xxrx%,%msgsum-unsubs-
resp-5xxtx%,%msgsum-unsubs-resp-6xxrx%,%msgsum-unsubs-resp-6xxtx%,%msgsum-
notify-attrx%,%msgsum-notify-atttx%,%msgsum-notify-succrx%,%msgsum-notify-
succtx%,%msgsum-notify-failrx%,%msgsum-notify-failtx%,%msgsum-notify-resp-
3xxrx%,%msgsum-notify-resp-3xxtx%,%msgsum-notify-resp-400rx%,%msgsum-notify-
resp-400tx%,%msgsum-notify-resp-481rx%,%msgsum-notify-resp-481tx%,%msgsum-
```

```

notify-resp-489rx%,%msgsum-notify-resp-489tx%,%msgsum-notify-resp-
4xxrx%,%msgsum-notify-resp-4xxtx%,%msgsum-notify-resp-500rx%,%msgsum-notify-
resp-500tx%,%msgsum-notify-resp-5xxrx%,%msgsum-notify-resp-5xxtx%,%msgsum-
notify-resp-6xxrx%,%msgsum-notify-resp-6xxtx%

```

#### cscf schema cscfSch5 format

```

EMS,CSCF5,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%msgsum-pub-
attrx%,%msgsum-pub-atttx%,%msgsum-pub-succrx%,%msgsum-pub-succtx%,%msgsum-pub-
failrx%,%msgsum-pub-failtx%,%msgsum-pub-resp-3xxrx%,%msgsum-pub-resp-
3xxtx%,%msgsum-pub-resp-400rx%,%msgsum-pub-resp-400tx%,%msgsum-pub-resp-
404rx%,%msgsum-pub-resp-404tx%,%msgsum-pub-resp-412rx%,%msgsum-pub-resp-
412tx%,%msgsum-pub-resp-423rx%,%msgsum-pub-resp-423tx%,%msgsum-pub-resp-
489rx%,%msgsum-pub-resp-489tx%,%msgsum-pub-resp-4xxrx%,%msgsum-pub-resp-
4xxtx%,%msgsum-pub-resp-500rx%,%msgsum-pub-resp-500tx%,%msgsum-pub-resp-
503rx%,%msgsum-pub-resp-503tx%,%msgsum-pub-resp-5xxrx%,%msgsum-pub-resp-
5xxtx%,%msgsum-pub-resp-6xxrx%,%msgsum-pub-resp-6xxtx%,%msgsum-unpub-
attrx%,%msgsum-unpub-atttx%,%msgsum-unpub-succrx%,%msgsum-unpub-succtx%,%msgsum-
unpub-failrx%,%msgsum-unpub-failtx%,%msgsum-unpub-resp-3xxrx%,%msgsum-unpub-
resp-3xxtx%,%msgsum-unpub-resp-400rx%,%msgsum-unpub-resp-400tx%,%msgsum-unpub-
resp-404rx%,%msgsum-unpub-resp-404tx%,%msgsum-unpub-resp-412rx%,%msgsum-unpub-
resp-412tx%,%msgsum-unpub-resp-423rx%,%msgsum-unpub-resp-423tx%,%msgsum-unpub-
resp-489rx%,%msgsum-unpub-resp-489tx%,%msgsum-unpub-resp-4xxrx%,%msgsum-unpub-
resp-4xxtx%,%msgsum-unpub-resp-500rx%,%msgsum-unpub-resp-500tx%,%msgsum-unpub-
resp-503rx%,%msgsum-unpub-resp-503tx%,%msgsum-unpub-resp-5xxrx%,%msgsum-unpub-
resp-5xxtx%,%msgsum-unpub-resp-6xxrx%,%msgsum-unpub-resp-6xxtx%,%pres-subs-
attrx%,%pres-subs-atttx%,%pres-subs-succrx%,%pres-subs-succtx%,%pres-subs-
failrx%,%pres-subs-failtx%,%pres-subs-resp-200rx%,%pres-subs-resp-200tx%,%pres-
subs-resp-202rx%,%pres-subs-resp-202tx%,%pres-subs-resp-400rx%,%pres-subs-resp-
400tx%,%pres-subs-resp-403rx%,%pres-subs-resp-403tx%

```

#### cscf schema cscfSch6 format

```

EMS,CSCF6,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%pres-subs-resp-
481rx%,%pres-subs-resp-481tx%,%pres-subs-resp-489rx%,%pres-subs-resp-
489tx%,%pres-subs-resp-500rx%,%pres-subs-resp-500tx%,%pres-subs-resp-
3xxrx%,%pres-subs-resp-3xxtx%,%pres-subs-resp-4xxrx%,%pres-subs-resp-
4xxtx%,%pres-subs-resp-5xxrx%,%pres-subs-resp-5xxtx%,%pres-subs-resp-
6xxrx%,%pres-subs-resp-6xxtx%,%pres-resubs-attrx%,%pres-resubs-atttx%,%pres-
resubs-succrx%,%pres-resubs-succtx%,%pres-resubs-failrx%,%pres-resubs-
failtx%,%pres-resubs-resp-200rx%,%pres-resubs-resp-200tx%,%pres-resubs-resp-
202rx%,%pres-resubs-resp-202tx%,%pres-resubs-resp-400rx%,%pres-resubs-resp-
400tx%,%pres-resubs-resp-403rx%,%pres-resubs-resp-403tx%,%pres-resubs-resp-
481rx%,%pres-resubs-resp-481tx%,%pres-resubs-resp-489rx%,%pres-resubs-resp-
489tx%,%pres-resubs-resp-500rx%,%pres-resubs-resp-500tx%,%pres-resubs-resp-
3xxrx%,%pres-resubs-resp-3xxtx%,%pres-resubs-resp-4xxrx%,%pres-resubs-resp-
4xxtx%,%pres-resubs-resp-5xxrx%,%pres-resubs-resp-5xxtx%,%pres-resubs-resp-
6xxrx%,%pres-resubs-resp-6xxtx%,%pres-unsubs-attrx%,%pres-unsubs-atttx%,%pres-
unsubs-succrx%,%pres-unsubs-succtx%,%pres-unsubs-failrx%,%pres-unsubs-
failtx%,%pres-unsubs-resp-200rx%,%pres-unsubs-resp-200tx%,%pres-unsubs-resp-
202rx%,%pres-unsubs-resp-202tx%,%pres-unsubs-resp-400rx%,%pres-unsubs-resp-
400tx%,%pres-unsubs-resp-403rx%,%pres-unsubs-resp-403tx%,%pres-unsubs-resp-
481rx%,%pres-unsubs-resp-481tx%,%pres-unsubs-resp-489rx%,%pres-unsubs-resp-
489tx%,%pres-unsubs-resp-500rx%,%pres-unsubs-resp-500tx%,%pres-unsubs-resp-

```

```
3xxrx%,%pres-unsubs-resp-3xxtx%,%pres-unsubs-resp-4xxrx%,%pres-unsubs-resp-4xxtx%,%pres-unsubs-resp-5xxrx%,%pres-unsubs-resp-5xxtx%,%pres-unsubs-resp-6xxrx%,%pres-unsubs-resp-6xxtx%
```

```
cscf schema cscfSch7 format
```

```
EMS,CSCF7,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%pres-notify-attrx%,%pres-notify-atttx%,%pres-notify-succrx%,%pres-notify-succtx%,%pres-notify-failrx%,%pres-notify-failtx%,%pres-notify-resp-3xxrx%,%pres-notify-resp-3xxtx%,%pres-notify-resp-400rx%,%pres-notify-resp-400tx%,%pres-notify-resp-481rx%,%pres-notify-resp-481tx%,%pres-notify-resp-489rx%,%pres-notify-resp-489tx%,%pres-notify-resp-4xxrx%,%pres-notify-resp-4xxtx%,%pres-notify-resp-500rx%,%pres-notify-resp-500tx%,%pres-notify-resp-5xxrx%,%pres-notify-resp-5xxtx%,%pres-notify-resp-6xxrx%,%pres-notify-resp-6xxtx%,%pres-pub-attrx%,%pres-pub-atttx%,%pres-pub-succrx%,%pres-pub-succtx%,%pres-pub-failrx%,%pres-pub-failtx%,%pres-pub-resp-3xxrx%,%pres-pub-resp-3xxtx%,%pres-pub-resp-400rx%,%pres-pub-resp-400tx%,%pres-pub-resp-404rx%,%pres-pub-resp-404tx%,%pres-pub-resp-412rx%,%pres-pub-resp-412tx%,%pres-pub-resp-423rx%,%pres-pub-resp-423tx%,%pres-pub-resp-489rx%,%pres-pub-resp-489tx%,%pres-pub-resp-4xxrx%,%pres-pub-resp-4xxtx%,%pres-pub-resp-500rx%,%pres-pub-resp-500tx%,%pres-pub-resp-503rx%,%pres-pub-resp-503tx%,%pres-pub-resp-5xxrx%,%pres-pub-resp-5xxtx%,%pres-pub-resp-6xxrx%,%pres-pub-resp-6xxtx%,%pres-unpub-attrx%,%pres-unpub-atttx%,%pres-unpub-succrx%,%pres-unpub-succtx%,%pres-unpub-failrx%,%pres-unpub-failtx%,%pres-unpub-resp-3xxrx%,%pres-unpub-resp-3xxtx%,%pres-unpub-resp-400rx%,%pres-unpub-resp-400tx%,%pres-unpub-resp-404rx%,%pres-unpub-resp-404tx%,%pres-unpub-resp-412rx%,%pres-unpub-resp-412tx%,%pres-unpub-resp-423rx%,%pres-unpub-resp-423tx%,%pres-unpub-resp-489rx%,%pres-unpub-resp-489tx%,%pres-unpub-resp-4xxrx%,%pres-unpub-resp-4xxtx%,%pres-unpub-resp-500rx%,%pres-unpub-resp-500tx%,%pres-unpub-resp-503rx%,%pres-unpub-resp-503tx%
```

```
cscf schema cscfSch8 format
```

```
EMS,CSCF8,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%pres-unpub-resp-5xxrx%,%pres-unpub-resp-5xxtx%,%pres-unpub-resp-6xxrx%,%pres-unpub-resp-6xxtx%,%reg-subs-attrx%,%reg-subs-atttx%,%reg-subs-succrx%,%reg-subs-succtx%,%reg-subs-failrx%,%reg-subs-failtx%,%reg-subs-resp-200rx%,%reg-subs-resp-200tx%,%reg-subs-resp-202rx%,%reg-subs-resp-202tx%,%reg-subs-resp-400rx%,%reg-subs-resp-400tx%,%reg-subs-resp-403rx%,%reg-subs-resp-403tx%,%reg-subs-resp-481rx%,%reg-subs-resp-481tx%,%reg-subs-resp-489rx%,%reg-subs-resp-489tx%,%reg-subs-resp-500rx%,%reg-subs-resp-500tx%,%reg-subs-resp-3xxrx%,%reg-subs-resp-3xxtx%,%reg-subs-resp-4xxrx%,%reg-subs-resp-4xxtx%,%reg-subs-resp-5xxrx%,%reg-subs-resp-5xxtx%,%reg-subs-resp-6xxrx%,%reg-subs-resp-6xxtx%,%reg-resubs-attrx%,%reg-resubs-atttx%,%reg-resubs-succrx%,%reg-resubs-succtx%,%reg-resubs-failrx%,%reg-resubs-failtx%,%reg-resubs-resp-200rx%,%reg-resubs-resp-200tx%,%reg-resubs-resp-202rx%,%reg-resubs-resp-202tx%,%reg-resubs-resp-400rx%,%reg-resubs-resp-400tx%,%reg-resubs-resp-403rx%,%reg-resubs-resp-403tx%,%reg-resubs-resp-481rx%,%reg-resubs-resp-481tx%,%reg-resubs-resp-489rx%,%reg-resubs-resp-489tx%,%reg-resubs-resp-500rx%,%reg-resubs-resp-500tx%,%reg-resubs-resp-3xxrx%,%reg-resubs-resp-3xxtx%,%reg-resubs-resp-4xxrx%,%reg-resubs-resp-4xxtx%,%reg-resubs-resp-5xxrx%,%reg-resubs-resp-5xxtx%,%reg-resubs-resp-6xxrx%,%reg-resubs-resp-6xxtx%,%reg-unsubs-attrx%,%reg-unsubs-atttx%,%reg-unsubs-succrx%,%reg-unsubs-succtx%,%reg-unsubs-failrx%,%reg-unsubs-failtx%,%reg-unsubs-resp-200rx%,%reg-unsubs-resp-200tx%,%reg-unsubs-resp-
```

```
202rx%,%reg-unsubs-resp-202tx%,%reg-unsubs-resp-400rx%,%reg-unsubs-resp-400tx%,%reg-unsubs-resp-403rx%,%reg-unsubs-resp-403tx%,%reg-unsubs-resp-481rx%
```

```
cscf schema cscfSch9 format
```

```
EMS,CSCF9,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%reg-unsubs-resp-481tx%,%reg-unsubs-resp-489rx%,%reg-unsubs-resp-489tx%,%reg-unsubs-resp-500rx%,%reg-unsubs-resp-500tx%,%reg-unsubs-resp-3xxrx%,%reg-unsubs-resp-3xxtx%,%reg-unsubs-resp-4xxrx%,%reg-unsubs-resp-4xxtx%,%reg-unsubs-resp-5xxrx%,%reg-unsubs-resp-5xxtx%,%reg-unsubs-resp-6xxrx%,%reg-unsubs-resp-6xxtx%,%reg-notify-attrx%,%reg-notify-atttx%,%reg-notify-succrx%,%reg-notify-succtx%,%reg-notify-failrx%,%reg-notify-failtx%,%reg-notify-resp-3xxrx%,%reg-notify-resp-3xxtx%,%reg-notify-resp-400rx%,%reg-notify-resp-400tx%,%reg-notify-resp-481rx%,%reg-notify-resp-481tx%,%reg-notify-resp-489rx%,%reg-notify-resp-489tx%,%reg-notify-resp-4xxrx%,%reg-notify-resp-4xxtx%,%reg-notify-resp-500rx%,%reg-notify-resp-500tx%,%reg-notify-resp-5xxrx%,%reg-notify-resp-5xxtx%,%reg-notify-resp-6xxrx%,%reg-notify-resp-6xxtx%,%reg-pub-attrx%,%reg-pub-atttx%,%reg-pub-succrx%,%reg-pub-succtx%,%reg-pub-failrx%,%reg-pub-failtx%,%reg-pub-resp-3xxrx%,%reg-pub-resp-3xxtx%,%reg-pub-resp-400rx%,%reg-pub-resp-400tx%,%reg-pub-resp-404rx%,%reg-pub-resp-404tx%,%reg-pub-resp-412rx%,%reg-pub-resp-412tx%,%reg-pub-resp-423rx%,%reg-pub-resp-423tx%,%reg-pub-resp-489rx%,%reg-pub-resp-489tx%,%reg-pub-resp-4xxrx%,%reg-pub-resp-4xxtx%,%reg-pub-resp-500rx%,%reg-pub-resp-500tx%,%reg-pub-resp-503rx%,%reg-pub-resp-503tx%,%reg-pub-resp-5xxrx%,%reg-pub-resp-5xxtx%,%reg-pub-resp-6xxrx%,%reg-pub-resp-6xxtx%,%reg-unpub-attrx%,%reg-unpub-atttx%,%reg-unpub-succrx%,%reg-unpub-succtx%,%reg-unpub-failrx%,%reg-unpub-failtx%,%reg-unpub-resp-3xxrx%,%reg-unpub-resp-3xxtx%,%reg-unpub-resp-400rx%,%reg-unpub-resp-400tx%,%reg-unpub-resp-404rx%,%reg-unpub-resp-404tx%,%reg-unpub-resp-412rx%,%reg-unpub-resp-412tx%
```

```
cscf schema cscfSchA format
```

```
EMS,CSCFA,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%reg-unpub-resp-423rx%,%reg-unpub-resp-423tx%,%reg-unpub-resp-489rx%,%reg-unpub-resp-489tx%,%reg-unpub-resp-4xxrx%,%reg-unpub-resp-4xxtx%,%reg-unpub-resp-500rx%,%reg-unpub-resp-500tx%,%reg-unpub-resp-503rx%,%reg-unpub-resp-503tx%,%reg-unpub-resp-5xxrx%,%reg-unpub-resp-5xxtx%,%reg-unpub-resp-6xxrx%,%reg-unpub-resp-6xxtx%,%wininfo-subs-attrx%,%wininfo-subs-atttx%,%wininfo-subs-succrx%,%wininfo-subs-succtx%,%wininfo-subs-failrx%,%wininfo-subs-failtx%,%wininfo-subs-resp-200rx%,%wininfo-subs-resp-200tx%,%wininfo-subs-resp-202rx%,%wininfo-subs-resp-202tx%,%wininfo-subs-resp-400rx%,%wininfo-subs-resp-400tx%,%wininfo-subs-resp-403rx%,%wininfo-subs-resp-403tx%,%wininfo-subs-resp-481rx%,%wininfo-subs-resp-481tx%,%wininfo-subs-resp-489rx%,%wininfo-subs-resp-489tx%,%wininfo-subs-resp-500rx%,%wininfo-subs-resp-500tx%,%wininfo-subs-resp-3xxrx%,%wininfo-subs-resp-3xxtx%,%wininfo-subs-resp-4xxrx%,%wininfo-subs-resp-4xxtx%,%wininfo-subs-resp-5xxrx%,%wininfo-subs-resp-5xxtx%,%wininfo-subs-resp-6xxrx%,%wininfo-subs-resp-6xxtx%,%wininfo-resubs-attrx%,%wininfo-resubs-atttx%,%wininfo-resubs-succrx%,%wininfo-resubs-succtx%,%wininfo-resubs-failrx%,%wininfo-resubs-failtx%,%wininfo-resubs-resp-200rx%,%wininfo-resubs-resp-200tx%,%wininfo-resubs-resp-202rx%,%wininfo-resubs-resp-202tx%,%wininfo-resubs-resp-400rx%,%wininfo-resubs-resp-400tx%,%wininfo-resubs-resp-403rx%,%wininfo-resubs-resp-403tx%,%wininfo-resubs-resp-481rx%,%wininfo-resubs-resp-481tx%,%wininfo-resubs-resp-489rx%,%wininfo-resubs-resp-489tx%,%wininfo-resubs-resp-500rx%,%wininfo-resubs-resp-500tx%,%wininfo-resubs-resp-3xxrx%,%wininfo-resubs-resp-3xxtx%,%wininfo-resubs-resp-4xxrx%,%wininfo-resubs-resp-4xxtx%,%wininfo-resubs-resp-
```

```
5xxrx%,%wininfo-resubs-resp-5xxtx%,%wininfo-resubs-resp-6xxrx%,%wininfo-resubs-resp-6xxtx%
```

```
cscf schema cscfSchB format
```

```
EMS,CSCFB,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%wininfo-unsubs-attrx%,%wininfo-unsubs-atttx%,%wininfo-unsubs-succrx%,%wininfo-unsubs-succtx%,%wininfo-unsubs-failrx%,%wininfo-unsubs-failtx%,%wininfo-unsubs-resp-200rx%,%wininfo-unsubs-resp-200tx%,%wininfo-unsubs-resp-202rx%,%wininfo-unsubs-resp-202tx%,%wininfo-unsubs-resp-400rx%,%wininfo-unsubs-resp-400tx%,%wininfo-unsubs-resp-403rx%,%wininfo-unsubs-resp-403tx%,%wininfo-unsubs-resp-481rx%,%wininfo-unsubs-resp-481tx%,%wininfo-unsubs-resp-489rx%,%wininfo-unsubs-resp-489tx%,%wininfo-unsubs-resp-500rx%,%wininfo-unsubs-resp-500tx%,%wininfo-unsubs-resp-3xxrx%,%wininfo-unsubs-resp-3xxtx%,%wininfo-unsubs-resp-4xxrx%,%wininfo-unsubs-resp-4xxtx%,%wininfo-unsubs-resp-5xxrx%,%wininfo-unsubs-resp-5xxtx%,%wininfo-unsubs-resp-6xxrx%,%wininfo-unsubs-resp-6xxtx%,%wininfo-notify-attrx%,%wininfo-notify-atttx%,%wininfo-notify-succrx%,%wininfo-notify-succtx%,%wininfo-notify-failrx%,%wininfo-notify-failtx%,%wininfo-notify-resp-3xxrx%,%wininfo-notify-resp-3xxtx%,%wininfo-notify-resp-400rx%,%wininfo-notify-resp-400tx%,%wininfo-notify-resp-481rx%,%wininfo-notify-resp-481tx%,%wininfo-notify-resp-489rx%,%wininfo-notify-resp-489tx%,%wininfo-notify-resp-4xxrx%,%wininfo-notify-resp-4xxtx%,%wininfo-notify-resp-500rx%,%wininfo-notify-resp-500tx%,%wininfo-notify-resp-5xxrx%,%wininfo-notify-resp-5xxtx%,%wininfo-notify-resp-6xxrx%,%wininfo-notify-resp-6xxtx%,%wininfo-pub-attrx%,%wininfo-pub-atttx%,%wininfo-pub-succrx%,%wininfo-pub-succtx%,%wininfo-pub-failrx%,%wininfo-pub-failtx%,%wininfo-pub-resp-3xxrx%,%wininfo-pub-resp-3xxtx%,%wininfo-pub-resp-400rx%,%wininfo-pub-resp-400tx%,%wininfo-pub-resp-404rx%,%wininfo-pub-resp-404tx%,%wininfo-pub-resp-412rx%,%wininfo-pub-resp-412tx%,%wininfo-pub-resp-423rx%,%wininfo-pub-resp-423tx%,%wininfo-pub-resp-489rx%,%wininfo-pub-resp-489tx%,%wininfo-pub-resp-4xxrx%,%wininfo-pub-resp-4xxtx%
```

```
cscf schema cscfSchC format
```

```
EMS,CSCFC,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%wininfo-pub-resp-500rx%,%wininfo-pub-resp-500tx%,%wininfo-pub-resp-503rx%,%wininfo-pub-resp-503tx%,%wininfo-pub-resp-5xxrx%,%wininfo-pub-resp-5xxtx%,%wininfo-pub-resp-6xxrx%,%wininfo-pub-resp-6xxtx%,%wininfo-unpub-attrx%,%wininfo-unpub-atttx%,%wininfo-unpub-succrx%,%wininfo-unpub-succtx%,%wininfo-unpub-failrx%,%wininfo-unpub-failtx%,%wininfo-unpub-resp-3xxrx%,%wininfo-unpub-resp-3xxtx%,%wininfo-unpub-resp-400rx%,%wininfo-unpub-resp-400tx%,%wininfo-unpub-resp-404rx%,%wininfo-unpub-resp-404tx%,%wininfo-unpub-resp-412rx%,%wininfo-unpub-resp-412tx%,%wininfo-unpub-resp-423rx%,%wininfo-unpub-resp-423tx%,%wininfo-unpub-resp-489rx%,%wininfo-unpub-resp-489tx%,%wininfo-unpub-resp-4xxrx%,%wininfo-unpub-resp-4xxtx%,%wininfo-unpub-resp-500rx%,%wininfo-unpub-resp-500tx%,%wininfo-unpub-resp-503rx%,%wininfo-unpub-resp-503tx%,%wininfo-unpub-resp-5xxrx%,%wininfo-unpub-resp-5xxtx%,%wininfo-unpub-resp-6xxrx%,%wininfo-unpub-resp-6xxtx%,%sigcomp-req-comp%,%sigcomp-req-decomp%,%sigcomp-resp-comp%,%sigcomp-resp-decomp%,%sigcomp-nack-rx%,%sigcomp-nack-tx%,%sigcomp-comp-fail%,%sigcomp-decomp-fail%,%sigcomp-bestout-compratio%,%sigcomp-worstout-compratio%,%sigcomp-bestin-compratio%,%sigcomp-worstin-compratio%,%dpeca-curr-sessions%,%dpeca-tot-sess-init%,%dpeca-tot-sess-terminated%,%dpeca-tot-sess-failovers%,%dpeca-tot-msg-received%,%dpeca-tot-msg-sent%,%dpeca-tot-aar-sent%,%dpeca-tot-aaa-received%,%dpeca-tot-aari-sent%,%dpeca-tot-aaai-received%,%dpeca-tot-aaai-accepted%,%dpeca-tot-aaai-rejected%,%dpeca-tot-aaai-timeout%,%dpeca-tot-aaru-sent%,%dpeca-tot-aaau-received%,%dpeca-tot-aaau-timeout%,%dpeca-tot-str-sent%,%dpeca-tot-sta-received%,%dpeca-tot-sta-timeout%,%dpeca-tot-asr-received%,%dpeca-tot-asa-sent%
```

```

cscf schema cscfSchD format
EMS,CSCFD,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%dpeca-tot-rar-
received%,%dpeca-tot-raa-sent%,%dpeca-tot-protocol-err%,%dpeca-tot-aaa-parse-
err%,%dpeca-tot-unk-sess-req%,%dpeca-tot-unk-cmd-codes%,%dpeca-tc-
logout%,%dpeca-tc-service-not-prov%,%dpeca-tc-bad-ans%,%dpeca-tc-
administrative%,%dpeca-tc-link-broken%,%dpeca-tc-auth-expired%,%dpeca-tc-user-
moved%,%dpeca-tc-session-timeout%,%dpeca-auth-rejected%,%active-im-
subs%,%active-ipsec-subs%,%active-ipsec-tcp-conn%,%active-presence-
subs%,%active-reg-subs%,%active-sigcomp-subs%,%active-voip-subs%,%closed-ipsec-
tcp-conn%,%curr-ipsec-subs%,%curr-presence-subs%,%curr-reg-subs%,%curr-sigcomp-
subs%,%de-regs%,%dpeca-exp-res-duplicated-af-session%,%dpeca-exp-res-filter-
restrictions%,%dpeca-exp-res-invalid-service-info%,%dpeca-exp-res-ipcan-session-
not-avail%,%dpeca-exp-res-req-service-not-authorized%,%dpeca-other-
errors%,%dpeca-tot-sess-failover-err%,%fail-ipsec-tcp-conn-in%,%fail-ipsec-tcp-
conn-out%,%fail-sec-regs%,%largerthansipmaxsize%,%message-3xx-rx%,%message-3xx-
tx%,%message-400-rx%,%message-400-tx%,%message-403-rx%,%message-403-
tx%,%message-404-rx%,%message-404-tx%,%message-415-rx%,%message-415-
tx%,%message-416-rx%,%message-416-tx%,%message-420-rx%,%message-420-
tx%,%message-421-rx%,%message-421-tx%,%message-480-rx%,%message-480-
tx%,%message-488-rx%,%message-488-tx%,%message-4xx-rx%,%message-4xx-
tx%,%message-500-rx%,%message-500-tx%,%message-513-rx%,%message-513-
tx%,%message-5xx-rx%,%message-5xx-tx%,%message-6xx-rx%,%message-6xx-
tx%,%message-attrx%,%message-atttx%,%message-failrx%,%message-failtx%,%message-
succrx%,%message-succtx%,%req-retx%,%reqresp-retx%,%resp-retx%,%sec-
regs%,%subdur1-2hr%,%subdur2-3hr%,%subdur3-4hr%,%subdur4-5hr%,%subdur5-
6hr%,%subdur6-7hr%,%subdur7-8hr%,%subdur8-9hr%,%subdur9-
10hr%,%subdur<1hr%,%subdur>10hr%

```

```

cscf schema cscfSchE format
EMS,CSCFE,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%subsetup1000-
1200ms%,%subsetup11-13sec%,%subsetup1200-1400ms%,%subsetup13-
15sec%,%subsetup1400-1600ms%,%subsetup15-17sec%,%subsetup1600-
1800ms%,%subsetup17-19sec%,%subsetup1800-2000ms%,%subsetup19-
21sec%,%subsetup200-400ms%,%subsetup2000-2200ms%,%subsetup2200-
2400ms%,%subsetup2400-2600ms%,%subsetup2600-2800ms%,%subsetup2800-
3000ms%,%subsetup3-5sec%,%subsetup400-600ms%,%subsetup5-7sec%,%subsetup600-
800ms%,%subsetup7-9sec%,%subsetup800-1000ms%,%subsetup9-
11sec%,%subsetup<200ms%,%subsetup>21sec%,%succ-ipsec-tcp-conn-in%,%succ-ipsec-
tcp-conn-out%,%tot-sip-msgs-
proc%,%totalcscfsess%,%ackreqretx%,%notifyreqretx%,%publishreqretx%,%referreqret
x%,%subscribereqretx%,%subscribe-attempt-rx%,%subscribe-attempt-tx%,%subscribe-
success-rx%,%subscribe-success-tx%,%subscribe-failure-rx%,%subscribe-failure-
tx%,%notify-attempt-rx%,%notify-attempt-tx%,%notify-success-rx%,%notify-success-
tx%,%notify-failure-rx%,%notify-failure-tx%,%publish-attempt-rx%,%publish-
attempt-tx%,%publish-success-rx%,%publish-success-tx%,%publish-failure-
rx%,%publish-failure-tx%,%de-regs-fromue%,%de-regs-fromnw%,%callrel-from-
ue%,%callrel-from-nw%,%callrel-from-radioloss%,%callrel-from-local%,%migrated-
tcp-conn%,%packet-tcp-rx%,%packet-tcp-tx%,%bytes-tcp-rx%,%bytes-tcp-
tx%,%message-tcp-request-rx%,%message-tcp-request-tx%,%message-tcp-response-
rx%,%message-tcp-response-tx%,%message-tcp-mtu-switch%,%sigcomp-averagein-
compratio%,%sigcomp-averageout-compratio%,%sitserrrx%,%sitserrtx%,%dereg-resp-

```

```
4xxrx%,%dereg-resp-4xxtx%,%dereg-resp-5xxrx%,%dereg-resp-5xxtx%,%dereg-resp-6xxrx%,%dereg-resp-6xxtx%
```

```
cscf schema cscfSchF format
```

```
EMS,CSCFF,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%reg-resp-4xxrx%,%reg-resp-4xxtx%,%reg-resp-5xxrx%,%reg-resp-5xxtx%,%reg-resp-6xxrx%,%reg-resp-6xxtx%,%rereg-resp-4xxrx%,%rereg-resp-4xxtx%,%rereg-resp-5xxrx%,%rereg-resp-5xxtx%,%rereg-resp-6xxrx%,%rereg-resp-6xxtx%,%call-resp-3xxrx%,%call-resp-3xxtx%,%call-resp-402rx%,%call-resp-402tx%,%call-resp-403rx%,%call-resp-403tx%,%call-resp-404rx%,%call-resp-404tx%,%call-resp-407rx%,%call-resp-407tx%,%call-resp-408rx%,%call-resp-408tx%,%call-resp-420rx%,%call-resp-420tx%,%call-resp-421rx%,%call-resp-421tx%,%call-resp-480rx%,%call-resp-480tx%,%call-resp-486rx%,%call-resp-486tx%,%call-resp-487rx%,%call-resp-487tx%,%call-resp-488rx%,%call-resp-488tx%,%call-resp-4xxrx%,%call-resp-4xxtx%,%call-resp-500rx%,%call-resp-500tx%,%call-resp-503rx%,%call-resp-503tx%,%call-resp-5xxrx%,%call-resp-5xxtx%,%call-resp-6xxrx%,%call-resp-6xxtx%,%total-roaming-ue-regs%,%total-roaming-ue-succ-regs%,%total-roaming-ue-fail-regs%,%total-roaming-ue-regs-403%,%total-roaming-ue-re-regs%,%total-roaming-ue-succ-re-regs%,%total-roaming-ue-fail-re-regs%,%total-roaming-ue-re-regs-403%,%total-roaming-ue-de-regs%,%total-roaming-ue-succ-de-regs%,%total-roaming-ue-fail-de-regs%,%total-roaming-ue-de-regs-403%,%perf-att-init-reg%,%perf-att-init-reg-3gpp-geran%,%perf-att-init-reg-3gpp-utran-fdd%,%perf-att-init-reg-3gpp2-1x%,%perf-att-init-reg-ieee-80211a%,%perf-att-init-reg-ieee-80211b%,%perf-att-init-reg-other-at%,%perf-succ-init-reg%,%perf-succ-init-reg-3gpp-geran%,%perf-succ-init-reg-3gpp-utran-fdd%,%perf-succ-init-reg-3gpp2-1x%,%perf-succ-init-reg-ieee-80211a%,%perf-succ-init-reg-ieee-80211b%,%perf-succ-init-reg-other%,%perf-fail-init-reg%,%perf-fail-init-reg-401%
```

```
cscf schema cscfSchG format
```

```
EMS,CSCFG,%date%,%time%,%vpnnname%,%vpnid%,%svcname%,%svcid%,%perf-fail-init-reg-403%,%perf-fail-init-reg-404%,%perf-fail-init-reg-420%,%perf-fail-init-reg-500%,%perf-fail-init-reg-other%,%perf-mean-init-reg-setup%,%perf-att-rereg%,%perf-att-rereg-3gpp-geran%,%perf-att-rereg-3gpp-utran-fdd%,%perf-att-rereg-3gpp2-1x%,%perf-att-rereg-ieee-80211a%,%perf-att-rereg-ieee-80211b%,%perf-att-rereg-other-at%,%perf-succ-rereg%,%perf-succ-rereg-3gpp-geran%,%perf-succ-rereg-3gpp-utran-fdd%,%perf-succ-rereg-3gpp2-1x%,%perf-succ-rereg-ieee-80211a%,%perf-succ-rereg-ieee-80211b%,%perf-succ-rereg-other%,%perf-fail-rereg%,%perf-fail-rereg-401%,%perf-fail-rereg-403%,%perf-fail-rereg-404%,%perf-fail-rereg-420%,%perf-fail-rereg-500%,%perf-fail-rereg-other%,%perf-att-dereg-ue%,%perf-att-dereg-ue-3gpp-geran%,%perf-att-dereg-ue-3gpp-utran-fdd%,%perf-att-dereg-ue-3gpp2-1x%,%perf-att-dereg-ue-ieee-80211a%,%perf-att-dereg-ue-ieee-80211b%,%perf-att-dereg-ue-other-at%,%perf-succ-dereg-ue%,%perf-succ-dereg-ue-3gpp-geran%,%perf-succ-dereg-ue-3gpp-utran-fdd%,%perf-succ-dereg-ue-3gpp2-1x%,%perf-succ-dereg-ue-ieee-80211a%,%perf-succ-dereg-ue-ieee-80211b%,%perf-succ-dereg-ue-other%,%perf-fail-dereg-ue%,%perf-fail-dereg-ue-401%,%perf-fail-dereg-ue-403%,%perf-fail-dereg-ue-404%,%perf-fail-dereg-ue-420%,%perf-fail-dereg-ue-500%,%perf-fail-dereg-ue-other%,%perf-att-dereg-hss%,%perf-succ-dereg-hss%,%perf-fail-dereg-hss%,%perf-fail-dereg-hss-401%,%perf-fail-dereg-hss-403%,%perf-fail-dereg-hss-404%,%perf-fail-dereg-hss-420%,%perf-fail-dereg-hss-500%,%perf-fail-dereg-hss-other%,%perf-att-dereg-serv%,%perf-succ-dereg-serv%,%perf-fail-dereg-serv%,%perf-fail-dereg-serv-401%,%perf-fail-dereg-serv-403%,%perf-fail-dereg-serv-404%
```

## cscf schema cscfSchH format

EMS, CSCFH, %date%, %time%, %vpnname%, %vpnid%, %svcname%, %svcid%, %perf-fail-dereg-serv-420%, %perf-fail-dereg-serv-500%, %perf-fail-dereg-serv-other%, %perf-att-init-3rdparty-reg%, %perf-succ-init-3rdparty-reg%, %perf-fail-init-3rdparty-reg%, %perf-fail-init-3rdparty-reg-401%, %perf-fail-init-3rdparty-reg-403%, %perf-fail-init-3rdparty-reg-404%, %perf-fail-init-3rdparty-reg-420%, %perf-fail-init-3rdparty-reg-500%, %perf-fail-init-3rdparty-reg-other%, %perf-att-uar%, %perf-succ-uaa%, %perf-fail-uaa%, %perf-att-sar%, %perf-succ-saa%, %perf-fail-saa%, %perf-att-session%, %perf-succ-session%, %perf-succ-session-180%, %perf-succ-session-200%, %perf-ans-session%, %perf-fail-session%, %perf-simul-ans-session%, %perf-att-lir%, %perf-succ-lia%, %perf-fail-lia%, %perf-att-session-frm-oth-domain%, %perf-frbnd-session-frm-oth-domain%, %perf-att-session-to-oth-domain%, %perf-frbnd-session-to-oth-domain%, %perf-att-init-reg-visited%, %perf-frbnd-init-reg-visited%, %perf-rmg-users-out%, %perf-att-mar%, %perf-succ-maa%, %perf-fail-maa%, %perf-att-ppr%, %perf-succ-ppa%, %perf-fail-ppa%, %perf-att-subscribe%, %perf-succ-subscribe%, %perf-fail-subscribe%, %perf-att-notify%, %perf-succ-notify%, %perf-fail-notify%, %dpeca-tot-uncorr-sta%, %dpeca-tot-uncorr-aaa%

## pdif schema pdifSch1 format

EMS, PDIF, %date%, %time%, %vpnname%, %vpnid%, %svcname%, %svcid%, %bindaddress%, %state%, %sess-curinprog%, %sess-curact%, %sess-curdorm%, %sess-cursip%, %sess-curmip%, %sess-sipattempt%, %sess-sipsuccess%, %sess-sipfail%, %sess-mipattempt%, %sess-mipsuccess%, %sess-mipfail%, %sess-sipfbacksucc%, %sess-sipfbacknotdone%, %sess-sipfbacknorrq%, %sess-sipfbacknotallw%, %sess-sipfbacktagaddr%, %sess-sipfbackmisc%, %sess-ttlsetup%, %sess-ttlattempt%, %sess-ttlattemptfail%, %sess-ttlrel%, %sess-ttlrellocal%, %sess-ttlrelremote%, %sess-ttlsip%, %sess-ttlmip%, %sess-discbeforeconn%, %sess-discipsec%, %sess-discadmin%, %sess-discidletimeout%, %sess-discabstimeout%, %sess-discclongdur%, %sess-discmmdtimeout%, %sess-discitysetuptimeout%, %sess-discsesssetuptimeout%, %sess-discnonexistpcrf%, %sess-discnoresource%, %sess-discauthfail%, %sess-discflowaddfail%, %sess-discinvdestctx%, %sess-discsourceviol%, %sess-discmipremote%, %sess-discmiplocal%, %sess-discdupreq%, %sess-discmacfail%, %sess-discaddrfail%, %sess-discmisc%, %sess-remaining%, %sess-limit%, %mac-authreq%, %mac-authreqvalid%, %mac-authreqinv%, %mac-authsucc%, %mac-authsuccmatch%, %mac-authsucchssfail%, %mac-authfail%, %mac-authfaildiam%, %mac-authfailuserunk%, %mac-authfailmacnotfound%, %mac-authfailmacmissing%, %mac-authfailmacmalformed%, %mac-authfailnosh%, %mac-authfailother%, %eap-rxttlsvrpsassthru%, %eap-rxchalsvrpsassthru%, %eap-rxsuccsvrpsassthru%, %eap-rxfailsvrpsassthru%, %eap-rxmobilepassthru%, %ipsec-tpacket%, %ipsec-txoctet%, %ipsec-rxpacket%, %ipsec-rxoctet%, %sess-curpmip%, %sess-pmipattempt%, %sess-pmipsuccess%, %sess-pmipfail%, %sess-ttlpmip%

## ss7link schema ss7linkSch1 format

EMS, SS7LINK1, %date%, %time%, %ss7rd-number%, %ss7-linkset-id%, %ss7-link-id%, %ss7-dpc-point-code%, %ss7-link-mtp3-changeover-order-tx%, %ss7-link-mtp3-changeover-order-rx%, %ss7-link-mtp3-changeover-order-ack-tx%, %ss7-link-mtp3-changeover-order-ack-rx%, %ss7-link-mtp3-changeback-declaration-tx%, %ss7-link-mtp3-changeback-declaration-rx%, %ss7-link-mtp3-changeback-ack-tx%, %ss7-link-mtp3-changeback-ack-rx%, %ss7-link-mtp3-emergency-changeover-tx%, %ss7-link-mtp3-emergency-changeover-rx%, %ss7-link-mtp3-emergency-changeover-ack-tx%, %ss7-link-mtp3-emergency-changeover-ack-rx%, %ss7-link-mtp3-inhibit-tx%, %ss7-link-mtp3-inhibit-rx%, %ss7-link-mtp3-inhibit-ack-tx%, %ss7-link-mtp3-inhibit-ack-rx%, %ss7-

```
link-mtp3-uninhibit-tx%,%ss7-link-mtp3-uninhibit-rx%,%ss7-link-mtp3-uninhibit-
ack-tx%,%ss7-link-mtp3-uninhibit-ack-rx%,%ss7-link-mtp3-inhibit-deny-tx%,%ss7-
link-mtp3-inhibit-deny-rx%,%ss7-link-mtp3-force-uninhibit-tx%,%ss7-link-mtp3-
force-uninhibit-rx%,%ss7-link-mtp3-local-inhibit-test-tx%,%ss7-link-mtp3-local-
inhibit-test-rx%,%ss7-link-mtp3-remote-inhibit-test-tx%,%ss7-link-mtp3-remote-
inhibit-test-rx%,%ss7-link-mtp3-connection-order-tx%,%ss7-link-mtp3-connection-
order-rx%,%ss7-link-mtp3-connection-order-ack-tx%,%ss7-link-mtp3-connection-
order-ack-rx%,%ss7-link-mtp3-test-tx%,%ss7-link-mtp3-test-rx%,%ss7-link-mtp3-
test-ack-tx%,%ss7-link-mtp3-test-ack-rx%,%ss7-link-mtp3-sif-octet-tx%,%ss7-link-
mtp3-sif-octet-rx%,%ss7-link-mtp3-sio-octet-tx%,%ss7-link-mtp3-sio-octet-
rx%,%ss7-link-mtp3-sio-msu-tx%,%ss7-link-mtp3-tx-msu-dropped%,%ss7-link-mtp3-tx-
msu-congestion-dropped%,%ss7-link-mtp3-invalid-pdu-rx%,%ss7-link-mtp3-
congestion-threshold1%,%ss7-link-mtp3-congestion-threshold2%,%ss7-link-mtp3-
congestion-threshold3%,%ss7-link-mtp3-unavail-duration%,%ss7-link-mtp3-
congested-duration%
```

ss7link schema ss7linkSch2 format

```
EMS,SS7LINK2,%date%,%time%,%ss7rd-number%,%ss7-linkset-id%,%ss7-link-id%,%ss7-
dpc-point-code%,%ss7-signalling-link-failure%,%ss7-dpc-route-set-test-msg-
tx%,%ss7-dpc-route-set-congestion-test-msg-tx%,%ss7-dpc-transfer-prohibited-
tx%,%ss7-dpc-transfer-restricted-tx%,%ss7-dpc-transfer-allowed-tx%,%ss7-dpc-
transfer-controlled-tx%,%ss7-dpc-sif-octets-tx%,%ss7-dpc-sio-octets-tx%,%ss7-
dpc-route-set-test-msg-rx%,%ss7-dpc-route-set-congestion-test-msg-rx%,%ss7-dpc-
transfer-prohibited-rx%,%ss7-dpc-transfer-restricted-rx%,%ss7-dpc-transfer-
allowed-rx%,%ss7-dpc-transfer-controlled-rx%,%ss7-dpc-usn-msg-rx%,%ss7-dpc-
unavailable-duration%,%ss7-dpc-unavailable-count%,%ss7-link-sscf-mtp3-frames-
tx%,%ss7-link-sscf-out-of-service-pdu-tx%,%ss7-link-sscf-processor-outage-
tx%,%ss7-link-sscf-in-service-pdu-tx%,%ss7-link-sscf-normal-pdu-tx%,%ss7-link-
sscf-emergency-pdu-tx%,%ss7-link-sscf-alignment-not-successfull-pdu-tx%,%ss7-
link-sscf-management-initiated-pdu-tx%,%ss7-link-sscf-protocol-error-pdu-
tx%,%ss7-link-sscf-proving-not-successfull-pdu-tx%,%ss7-link-sscf-mtp3-frames-
rx%,%ss7-link-sscf-out-of-service-pdu-rx%,%ss7-link-sscf-processor-outage-
rx%,%ss7-link-sscf-in-service-pdu-rx%,%ss7-link-sscf-normal-pdu-rx%,%ss7-link-
sscf-emergency-pdu-rx%,%ss7-link-sscf-alignment-not-successfull-pdu-rx%,%ss7-
link-sscf-management-initiated-pdu-rx%,%ss7-link-sscf-protocol-error-pdu-
rx%,%ss7-link-sscf-proving-not-successfull-pdu-rx%,%ss7-link-qsaaal-vpi%,%ss7-
link-qsaaal-vci%,%ss7-link-qsaaal-req-initialization-tx%,%ss7-link-qsaaal-req-ack-
tx%,%ss7-link-qsaaal-connection-reject-tx%,%ss7-link-qsaaal-disconnect-command-
tx%,%ss7-link-qsaaal-disconnect-ack-tx%,%ss7-link-qsaaal-resynchronization-
command-tx%
```

ss7link schema ss7linkSch3 format

```
EMS,SS7LINK3,%date%,%time%,%ss7rd-number%,%ss7-linkset-id%,%ss7-link-id%,%ss7-
dpc-point-code%,%ss7-link-qsaaal-resynchronization-ack-tx%,%ss7-link-qsaaal-
recovery-command-tx%,%ss7-link-qsaaal-seq-connection-mode-data-tx%,%ss7-link-
qsaaal-poll-tx%,%ss7-link-qsaaal-stat-tx%,%ss7-link-qsaaal-ustat-tx%,%ss7-link-
qsaaal-unnumbered-user-data-tx%,%ss7-link-qsaaal-unnumbered-management-data-
tx%,%ss7-link-qsaaal-unknown-pdu-type-tx%,%ss7-link-qsaaal-tx-discarded-
sdus%,%ss7-link-qsaaal-tx-pdus-error-pdus%,%ss7-link-qsaaal-tx-discarded-
pdus%,%ss7-link-qsaaal-tx-buffer-in-use-counter%,%ss7-link-qsaaal-tx-buffer-in-
use-gauge%,%ss7-link-qsaaal-req-initialization-rx%,%ss7-link-qsaaal-req-ack-
rx%,%ss7-link-qsaaal-connection-reject-rx%,%ss7-link-qsaaal-disconnect-command-
```

```
rx%,%ss7-link-qsaa-disconnect-ack-rx%,%ss7-link-qsaa-resynchronization-
command-rx%,%ss7-link-qsaa-resynchronization-ack-rx%,%ss7-link-qsaa-recovery-
command-rx%,%ss7-link-qsaa-recovery-ack-rx%,%ss7-link-qsaa-seq-connection-
mode-data-rx%,%ss7-link-qsaa-poll-rx%,%ss7-link-qsaa-stat-rx%,%ss7-link-qsaa-
ustat-rx%,%ss7-link-qsaa-unnumbered-user-data-rx%,%ss7-link-qsaa-unnumbered-
management-data-rx%,%ss7-link-qsaa-unknown-pdu-type-rx%,%ss7-link-qsaa-rx-
pdus-error-pdus%,%ss7-link-qsaa-rx-discarded-pdus%,%ss7-link-qsaa-rx-buffer-
in-use-counter%,%ss7-link-qsaa-rx-buffer-in-use-gauge%,%ss7-link-qsaa-
recovery-ack-tx%,%ss7-link-mtp3-sio-msu-rx%,%ss7-link-mtp3-inhibited-duration%
```

#### gprs schema gprsSch1 format

```
EMS,GPRS1,%date%,%time%,%vpname%,%vpnid%,%servname%,%nse-id%,%ns-num-bytes-
rvcd%,%ns-num-bytes-sent%,%ns-num-nsvc-failed%,%ns-num-nsvc-congest%,%ns-num-
unit-data-msg-rcvd%,%ns-num-unit-data-msg-sent%,%ns-num-alive-pdu-rcvd%,%ns-num-
alive-pdu-sent%,%ns-num-alive-ack-pdu-rcvd%,%ns-num-alive-ack-pdu-sent%,%ns-num-
block-pdu-rcvd%,%ns-num-block-pdu-sent%,%ns-num-block-ack-pdu-rcvd%,%ns-num-
block-ack-pdu-sent%,%ns-num-unblock-pdu-rcvd%,%ns-num-unblock-pdu-sent%,%ns-num-
unblock-ack-pdu-rcvd%,%ns-num-unblock-ack-pdu-sent%,%ns-num-reset-pdu-rcvd%,%ns-
num-reset-pdu-sent%,%ns-num-reset-ack-pdu-rcvd%,%ns-num-reset-ack-pdu-sent%,%ns-
num-status-pdu-rcvd%,%ns-num-status-pdu-sent%,%num-sns-size-rcvd%,%num-sns-size-
ack-sent%,%num-sns-size-fail-rcvd-unknown-nse%,%num-sns-config-rcvd%,%num-sns-
config-sent%,%num-sns-config-ack-sent%,%num-sns-config-ack-rcvd%,%sns-config-
fail-rcv-pdu-not-compat-state%,%sns-config-fail-sent-pdu-not-compat-state%,%sns-
config-fail-rcv-inval-ipv4-endpt%,%sns-config-fail-sent-inval-ipv4-endpt%,%sns-
config-fail-rcv-inval-ipv6-endpt%,%sns-config-fail-sent-inval-ipv6-endpt%,%sns-
config-fail-rcv-prot-err-unspec%,%sns-config-fail-sent-prot-err-unspec%,%sns-
config-fail-rcv-inval-essential-param%,%sns-config-fail-sent-inval-essential-
param%,%sns-config-fail-rcv-internal-err%,%sns-config-fail-sent-internal-
err%,%sns-config-fail-rcv-inval-weight%,%sns-config-fail-sent-inval-
weight%,%sns-config-fail-sent-no-rsp-from-peer%,%num-sns-add-rcvd%,%num-sns-add-
sent%,%sns-add-fail-rcv-pdu-not-compat-state%,%sns-add-fail-sent-pdu-not-compat-
state%,%sns-add-fail-rcv-inval-ipv4-endpt%,%sns-add-fail-sent-inval-ipv4-
endpt%,%sns-add-fail-rcv-inval-ipv6-endpt%,%sns-add-fail-sent-inval-ipv6-
endpt%,%sns-add-fail-rcv-prot-err-unspec%
```

#### gprs schema gprsSch2 format

```
EMS,GPRS2,%date%,%time%,%vpname%,%vpnid%,%servname%,%nse-id%,%sns-add-fail-
sent-prot-err-unspec%,%sns-add-fail-rcv-inval-essential-param%,%sns-add-fail-
sent-inval-essential-param%,%sns-add-fail-rcv-internal-err%,%sns-add-fail-sent-
internal-err%,%sns-add-fail-rcv-inval-weight%,%sns-add-fail-sent-inval-
weight%,%sns-add-fail-sent-no-rsp-from-peer%,%num-sns-delete-rcvd%,%num-sns-
delete-sent%,%sns-delete-fail-rcv-pdu-not-compat-state%,%sns-delete-fail-sent-
pdu-not-compat-state%,%sns-delete-fail-rcv-unknown-ip-endpt%,%sns-delete-fail-
sent-unknown-ip-endpt%,%sns-delete-fail-rcv-unknown-ip-address%,%sns-delete-
fail-sent-unknown-ip-address%,%sns-delete-fail-rcv-prot-err-unspec%,%sns-delete-
fail-sent-prot-err-unspec%,%sns-delete-fail-rcv-inval-essential-param%,%sns-
delete-fail-sent-inval-essential-param%,%sns-delete-fail-rcv-internal-err%,%sns-
delete-fail-sent-internal-err%,%sns-delete-fail-sent-no-rsp-from-peer%,%num-sns-
cw-rcvd%,%num-sns-cw-sent%,%sns-cw-fail-rcv-pdu-not-compat-state%,%sns-cw-fail-
sent-pdu-not-compat-state%,%sns-cw-fail-rcv-inval-weight%,%sns-cw-fail-sent-
inval-weight%,%sns-cw-fail-rcv-unknown-ip-endpt%,%sns-cw-fail-sent-unknown-ip-
endpt%,%sns-cw-fail-rcv-unknown-ip-addr%,%sns-cw-fail-sent-unknown-ip-
```

```
addr%,%sns-cw-fail-rcv-prot-err-unspec%,%sns-cw-fail-sent-prot-err-unspec%,%sns-
cw-fail-rcv-inval-essential-param%,%sns-cw-fail-sent-inval-essential-
param%,%sns-cw-fail-rcv-internal-err%,%sns-cw-fail-sent-internal-err%,%sns-cw-
fail-sent-no-rsp-from-peer%,%sns-num-ack-rcvd%,%sns-num-ack-sent%,%sns-num-
unknown-msg%,%sns-num-status-pdu-sent%,%bssgp-total-usr-req-drop%,%bssgp-usr-
req-drop-unknown-bvci%,%bssgp-usr-req-drop-blocked-bvc%,%bssgp-usr-req-drop-
encoding-fail%,%bssgp-usr-req-drop-bvc-flow-ctrl-rcvd%
```

#### gprs schema gprsSch3 format

```
EMS,GPRS3,%date%,%time%,%vpnname%,%vpnid%,%servname%,%nse-id%,%bssgp-usr-req-
drop-bvc-flow-ctrl-ack-sent%,%bssgp-usr-req-drop-block-rcvd%,%bssgp-usr-req-
drop-block-ack-sent%,%bssgp-usr-req-drop-unblock-rcvd%,%bssgp-usr-req-drop-
unblock-ack-sent%,%bssgp-usr-req-drop-bvc-reset-sent%,%bssgp-usr-req-drop-bvc-
reset-rcvd%,%bssgp-usr-req-drop-bvc-reset-ack-sent%,%bssgp-usr-req-drop-bvc-
reset-ack-rcvd%,%bssgp-flush-llc-msg-sent%,%bssgp-flush-llc-ack-msg-
rcvd%,%bssgp-cs-paging-msg-sent%,%bssgp-ps-paging-msg-sent%,%bssgp-ra-cap-
update-msg-rcvd%,%bssgp-ra-cap-update-ack-msg-sent%,%bssgp-radio-status-msg-
sent%,%bssgp-radio-status-msg-rcvd%,%bssgp-suspend-msg-rcvd%,%bssgp-suspend-ack-
msg-sent%,%bssgp-suspend-nack-msg-sent%,%bssgp-resume-msg-rcvd%,%bssgp-resume-
ack-msg-sent%,%bssgp-resume-nack-msg-sent%,%bssgp-downlink-unitdata-
sent%,%bssgp-uplink-unitdata-rcvd%,%bssgp-llc-pdu-discard-msg-rcvd%,%bssgp-ms-
flow-ctrl-msg-rcvd%,%bssgp-ms-flow-ctrl-ack-msg-sent%,%bssgp-bvc-status-msg-
rcvd%,%bssgp-bvc-status-msg-sent%,%sndcp-xid-req-ms-init%,%sndcp-xid-ind-sgsn-
init%,%sndcp-npdus-ack-rcvd-ms%,%sndcp-npdus-ack-sent-ms%,%sndcp-npdus-uack-
rcvd-ms%,%sndcp-npdus-uack-sent-ms%,%sndcp-bytes-ack-rcvd-ms%,%sndcp-bytes-ack-
sent-ms%,%sndcp-bytes-uack-rcvd-ms%,%sndcp-bytes-uack-sent-ms%,%sndcp-pdu-drop-
rcvd-from-llc%,%sndcp-inval-ref-num-rcvd-from-llc%,%sndcp-npdu-sent-sgsn-
irau%,%sndcp-npdu-rcvd-sgsn-irau%,%llc-data-req-rx%,%llc-data-cfm-tx%,%llc-data-
ind-tx%,%llc-data-sent-ind-tx%,%llc-unit-data-req-rx%,%llc-unit-data-ind-
tx%,%llc-discarded-frames-rx%,%llc-discarded-frames-tx%,%llc-error-frames-
rx%,%llc-unrecog-frames-rx%,%llc-xid-collisions%,%llc-ciphering-errors%,%llc-
fcs-errors%,%llc-frame-stats-ui-rx%,%llc-frame-stats-ui-tx%,%bssgp-bvc-unknown-
ms-status-msg-sent%
```

#### gprs schema gprsSch4 format

```
EMS,GPRS4,%date%,%time%,%vpnname%,%vpnid%,%servname%,%nse-id%,%bssgp-bvc-
unknown-ms-status-msg-rcvd%,%packets-sent-to-bsc%,%packets-rcvd-from-
bsc%,%bytes-sent-to-bsc%,%bytes-rcvd-from-bsc%,%llc-frame-stats-octets-
rcvd%,%llc-frame-stats-octets-sent%,%llc-frame-stats-unack-frames-rcvd%,%llc-
frame-stats-unack-frames-sent%,%llc-frame-stats-xid-rcvd%,%llc-frame-stats-xid-
sent%
```

#### cscfintf schema cscfintfSch1 format

```
EMS,CSCFINTF,%date%,%time%,%vpnname%,%vpnid%,%svcname%,%svcid%,%peer-
ipaddr%,%peer-
domain%,%regreqrx%,%regreqtx%,%invreqrx%,%invreqtx%,%ackreqrx%,%ackreqtx%,%byere-
qrx%,%byereqtx%,%cancreqrx%,%cancreqtx%,%optreqrx%,%optreqtx%,%prackreqrx%,%prac-
kreqtx%,%subreqrx%,%subreqtx%,%notreqrx%,%notreqtx%,%refreqrx%,%refreqtx%,%infor-
eqrx%,%inforeqtx%,%updregrx%,%updregrtx%,%msgreqrx%,%msgreqtx%,%pubreqrx%,%pubreq-
tx%,%tryrsprx%,%tryrsptx%,%rngrsprx%,%rngrsptx%,%fwdrsprx%,%fwdrsptx%,%quersprx%
,%quersptx%,%prgrsprx%,%prgrsptx%,%200-rsprx%,%200-rsptx%,%202-rsprx%,%202-
rsptx%,%mchrsprx%,%mchrsptx%,%mpersprx%,%mpersptx%,%mtersprx%,%mtersptx%,%upxrs-
prx%,%upxrsptx%,%altrsprx%,%altrsptx%,%brqerrrx%,%brqerrtx%,%uauerrrx%,%uauerrtx%
```

```
,%prerrrrx%,%prerrrtx%,%forerrrrx%,%forerrrtx%,%nfderrrrx%,%nfderrrtx%,%mnaerrrrx%,%mna
errrtx%,%nac406errrrx%,%nac406errrtx%,%parerrrrx%,%parerrrtx%,%rtoerrrrx%,%rtoerrrtx%,%
conferrrrx%,%conferrrtx%,%lrerrrrx%,%lrerrrtx%,%gonerrrrx%,%gonerrrtx%,%crferrrrx%,%crf
errrtx%,%relerrrrx%,%relerrrtx%,%rulerrrrx%,%rulerrrtx%,%umterrrrx%,%umterrtx%,%uuserr
rrrx%,%uuserrrtx%,%bexerrrrx%,%bexerrrtx%,%exrerrrrx%,%exrerrrtx%,%itberrrrx%,%itberrtx%
,%blierrrrx%,%blierrrtx%,%tnaerrrrx%,%tnaerrrtx%,%tdnerrrrx%,%tdnerrtx%,%ldterrrrx%,%l
dterrtx%,%tmherrrrx%,%tmherrrtx%,%adierrrrx%,%adierrrtx%,%amberrrrx%,%amberrtx%,%bhre
rrrx%,%bhrerrrtx%,%rqcerrrrx%,%rqcerrtx%,%namerrrrx%,%namerrrtx%,%beerrrrx%,%beerrtx%
,%trperrrrx%,%trperrtx%,%udperrrrx%,%udperrtx%,%sarerrrrx%,%sarerrrtx%,%ineerrrrx%,%i
neerrrtx%,%nimerrrrx%,%nimerrtx%,%bgterrrrx%,%bgterrtx%,%suaerrrrx%,%suaerrrtx%,%gtte
rrrx%,%gtterrtx%,%bsverrrrx%,%bsverrtx%,%mtlerrrrx%,%mtlerrtx%,%pcferrrrx%,%pcferrt
x%,%bewerrrrx%,%bewerrrtx%,%decerrrrx%,%decerrrtx%,%neaerrrrx%,%neaerrrtx%,%nac606errr
x%,%nac606errrtx%,%sitserrrrx%,%sitserrtx%
```

nat-realm schema natrealmSch1 format

```
EMS,NATRealm,%date%,%time%,%vpnname%,%realmname%,%nat-bind-updates%,%nat-rlm-
bytes-tx%,%nat-rlm-flows%,%nat-rlm-ip-denied%,%nat-rlm-port-denied%,%nat-rlm-
ttl-ips%,%nat-rlm-ips-in-use%,%nat-rlm-current-users%,%nat-rlm-ttl-port-
chunks%,%nat-rlm-chunks-in-use%
```

phspc schema phspcSch1 format

```
EMS,PHSPC1,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%peeripaddr%,%x5s
mentstachareq-totsent%,%x5smentstachareq-retranssent%,%x5smentstachareq-
totsendfail%,%x5smentstachareq-totrec%,%x5smentstachareq-
totacc%,%x5smentstachareq-totrelay%,%x5smentstachareq-
totdenied%,%x5smentstachareq-totdiscard%,%x5smentstachareq-
badform%,%x5smentstachareq-decodeerr%,%x5smentstachareq-
unspecerr%,%x5smentstachareq-missmandtlv%,%x5smentstachareq-
tlvvalinval%,%x5smentstachareq-unknowntrlv%,%x5smentstachareq-
duptlvfound%,%x5smentstachareq-nosessfound%,%x5smentstachareq-
adminprohib%,%x5smentstachareq-noresourcedrop%,%x5smentstachareq-
transiderr%,%x5smentstacharsp-totsent%,%x5smentstacharsp-
retranssent%,%x5smentstacharsp-totsendfail%,%x5smentstacharsp-
totrec%,%x5smentstacharsp-totacc%,%x5smentstacharsp-totrelay%,%x5smentstacharsp-
totdenied%,%x5smentstacharsp-totdiscard%,%x5smentstacharsp-
badform%,%x5smentstacharsp-decodeerr%,%x5smentstacharsp-
unspecerr%,%x5smentstacharsp-missmandtlv%,%x5smentstacharsp-
tlvvalinval%,%x5smentstacharsp-unknowntrlv%,%x5smentstacharsp-
duptlvfound%,%x5smentstacharsp-nosessfound%,%x5smentstacharsp-
adminprohib%,%x5smentstacharsp-noresourcedrop%,%x5smentstacharsp-
transiderr%,%x5smentstachaack-totsent%,%x5smentstachaack-
retranssent%,%x5smentstachaack-totsendfail%,%x5smentstachaack-
totrec%,%x5smentstachaack-totacc%,%x5smentstachaack-
transiderr%,%x5smexitstachareq-totsent%,%x5smexitstachareq-
retranssent%,%x5smexitstachareq-totsendfail%,%x5smexitstachareq-
totrec%,%x5smexitstachareq-totacc%,%x5smexitstachareq-
totrelay%,%x5smexitstachareq-totdenied%,%x5smexitstachareq-
totdiscard%,%x5smexitstachareq-badform%,%x5smexitstachareq-
decodeerr%,%x5smexitstachareq-unspecerr%,%x5smexitstachareq-
missmandtlv%,%x5smexitstachareq-tlvvalinval%
```

phspc schema phspcSch2 format

```
EMS,PHSPC2,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%x5smexitstachare
```

```

q-unknown-tlv%,%5smexitstachareq-duptlvfound%,%5smexitstachareq-
nosessfound%,%5smexitstachareq-adminprohib%,%5smexitstachareq-
noresourcedrop%,%5smexitstachareq-transiderr%,%5smexitstacharsp-
totsent%,%5smexitstacharsp-retranssent%,%5smexitstacharsp-
totsendfail%,%5smexitstacharsp-totrec%,%5smexitstacharsp-
totacc%,%5smexitstacharsp-totrelay%,%5smexitstacharsp-
totdenied%,%5smexitstacharsp-totdiscard%,%5smexitstacharsp-
badform%,%5smexitstacharsp-decodeerr%,%5smexitstacharsp-
unspecerr%,%5smexitstacharsp-missmandtlv%,%5smexitstacharsp-
tlvvalinval%,%5smexitstacharsp-unknown-tlv%,%5smexitstacharsp-
duptlvfound%,%5smexitstacharsp-nosessfound%,%5smexitstacharsp-
adminprohib%,%5smexitstacharsp-nosourcedrop%,%5smexitstacharsp-
transiderr%,%5locregreq-totsent%,%5locregreq-retranssent%,%5locregreq-
totsendfail%,%5locregreq-totrec%,%5locregreq-totacc%,%5locregreq-
totrelay%,%5locregreq-totdenied%,%5locregreq-totdiscard%,%5locregreq-
badform%,%5locregreq-decodeerr%,%5locregreq-unspecerr%,%5locregreq-
missmandtlv%,%5locregreq-tlvvalinval%,%5locregreq-unknown-tlv%,%5locregreq-
duptlvfound%,%5locregreq-nosessfound%,%5locregreq-adminprohib%,%5locregreq-
noresourcedrop%,%5locregreq-transiderr%,%5locregrsp-totsent%,%5locregrsp-
retranssent%,%5locregrsp-totsendfail%,%5locregrsp-totrec%,%5locregrsp-
totacc%,%5locregrsp-totrelay%,%5locregrsp-totdenied%,%5locregrsp-
totdiscard%,%5locregrsp-badform%,%5locregrsp-decodeerr%,%5locregrsp-
unspecerr%,%5locregrsp-missmandtlv%,%5locregrsp-tlvvalinval%,%5locregrsp-
unknown-tlv%,%5locregrsp-duptlvfound%,%5locregrsp-nosessfound%,%5locregrsp-
adminprohib%,%5locregrsp-nosourcedrop%,%5locregrsp-transiderr%

```

phspc schema phspcSch3 format

```

EMS,PHSPC3,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%5locregack-
totsent%,%5locregack-retranssent%,%5locregack-totsendfail%,%5locregack-
totrec%,%5locregack-totacc%,%5locregack-totrelay%,%5locregack-
totdenied%,%5locregack-totdiscard%,%5locregack-badform%,%5locregack-
decodeerr%,%5locregack-unspecerr%,%5locregack-missmandtlv%,%5locregack-
tlvvalinval%,%5locregack-unknown-tlv%,%5locregack-duptlvfound%,%5locregack-
nosessfound%,%5locregack-adminprohib%,%5locregack-
noresourcedrop%,%5locregack-transiderr%,%5pagannouce-totsent%,%5pagannouce-
retranssent%,%5pagannouce-totsendfail%,%5pagannouce-totrec%,%5pagannouce-
totacc%,%5pagannouce-totrelay%,%5pagannouce-totdenied%,%5pagannouce-
totdiscard%,%5pagannouce-badform%,%5pagannouce-decodeerr%,%5pagannouce-
unspecerr%,%5pagannouce-missmandtlv%,%5pagannouce-tlvvalinval%,%5pagannouce-
unknown-tlv%,%5pagannouce-duptlvfound%,%5pagannouce-nosessfound%,%5pagannouce-
adminprohib%,%5pagannouce-nosourcedrop%,%5pagannouce-transiderr%,%5unknown-
totrec%,%5unknown-totacc%,%5unknown-totrelay%,%5unknown-
totdenied%,%5unknown-totdiscard%,%5unknown-badform%,%5unknown-
decodeerr%,%5unknown-unspecerr%,%5unknown-missmandtlv%,%5unknown-
tlvvalinval%,%5unknown-unknown-tlv%,%5unknown-duptlvfound%,%5unknown-
nosessfound%,%5unknown-adminprohib%,%5unknown-nosourcedrop%,%5unknown-
transiderr%,%6smentstachareq-nosessfound%,%6smentstachareq-
adminprohib%,%6smentstachareq-nosourcedrop%,%6smentstachareq-
transiderr%,%6smentstacharsp-totsent%,%6smentstacharsp-
retranssent%,%6smentstacharsp-totsendfail%,%6smentstacharsp-
totrec%,%6smentstacharsp-totacc%,%6smentstacharsp-totrelay%,%6smentstacharsp-
totdenied%,%6smentstacharsp-totdiscard%,%6smentstacharsp-badform%

```

```

phspc schema phspcSch4 format
EMS, PHSPC4, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %x6smentstacharsp-
-decodeerr%, %x6smentstacharsp-unspecerr%, %x6smentstacharsp-
missmandtlv%, %x6smentstacharsp-tlvvalinval%, %x6smentstacharsp-
unknownntlv%, %x6smentstacharsp-duptlvfound%, %x6smentstacharsp-
nosessfound%, %x6smentstacharsp-adminprohib%, %x6smentstacharsp-
noresourcedrop%, %x6smentstacharsp-transiderr%, %x6smentstachaack-
totsent%, %x6smentstachaack-retranssent%, %x6smentstachaack-
totsendfail%, %x6smentstachaack-totrec%, %x6smentstachaack-
totacc%, %x6smentstachaack-totrelay%, %x6smentstachaack-
totdenied%, %x6smentstachaack-totdiscard%, %x6smentstachaack-
badform%, %x6smentstachaack-decodeerr%, %x6smentstachaack-
unspecerr%, %x6smentstachaack-missmandtlv%, %x6smentstachaack-
tlvvalinval%, %x6smentstachaack-unknownntlv%, %x6smentstachaack-
duptlvfound%, %x6smentstachaack-nosessfound%, %x6smentstachaack-
adminprohib%, %x6smentstachaack-noresourcedrop%, %x6smentstachaack-
transiderr%, %x6smexitstachareq-totsent%, %x6smexitstachareq-
retranssent%, %x6smexitstachareq-totsendfail%, %x6smexitstachareq-
totrec%, %x6smexitstachareq-totacc%, %x6smexitstachareq-
totrelay%, %x6smexitstachareq-totdenied%, %x6smexitstachareq-
totdiscard%, %x6smexitstachareq-badform%, %x6smexitstachareq-
decodeerr%, %x6smexitstachareq-unspecerr%, %x6smexitstachareq-
missmandtlv%, %x6smexitstachareq-tlvvalinval%, %x6smexitstachareq-
unknownntlv%, %x6smexitstachareq-duptlvfound%, %x6smexitstachareq-
nosessfound%, %x6smexitstachareq-adminprohib%, %x6smexitstachareq-
noresourcedrop%, %x6smexitstachareq-transiderr%, %x6smexitstacharsp-
totsent%, %x6smexitstacharsp-retranssent%, %x6smexitstacharsp-
totsendfail%, %x6smexitstacharsp-totrec%, %x6smexitstacharsp-
totacc%, %x6smexitstacharsp-totrelay%, %x6smexitstacharsp-
totdenied%, %x6smexitstacharsp-totdiscard%

```

```

phspc schema phspcSch5 format
EMS, PHSPC5, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %x6smexitstachars
p-badform%, %x6smexitstacharsp-decodeerr%, %x6smexitstacharsp-
unspecerr%, %x6smexitstacharsp-missmandtlv%, %x6smexitstacharsp-
tlvvalinval%, %x6smexitstacharsp-unknownntlv%, %x6smexitstacharsp-
duptlvfound%, %x6smexitstacharsp-nosessfound%, %x6smexitstacharsp-
adminprohib%, %x6smexitstacharsp-noresourcedrop%, %x6smexitstacharsp-
transiderr%, %x6inipagreq-totsent%, %x6inipagreq-retranssent%, %x6inipagreq-
totsendfail%, %x6inipagreq-totrec%, %x6inipagreq-totacc%, %x6inipagreq-
totrelay%, %x6inipagreq-totdenied%, %x6inipagreq-totdiscard%, %x6inipagreq-
badform%, %x6inipagreq-decodeerr%, %x6inipagreq-unspecerr%, %x6inipagreq-
missmandtlv%, %x6inipagreq-tlvvalinval%, %x6inipagreq-unknownntlv%, %x6inipagreq-
duptlvfound%, %x6inipagreq-nosessfound%, %x6inipagreq-adminprohib%, %x6inipagreq-
noresourcedrop%, %x6inipagreq-transiderr%, %x6inipagrsp-totsent%, %x6inipagrsp-
retranssent%, %x6inipagrsp-totsendfail%, %x6inipagrsp-totrec%, %x6inipagrsp-
totacc%, %x6inipagrsp-totrelay%, %x6inipagrsp-totdenied%, %x6inipagrsp-
totdiscard%, %x6inipagrsp-badform%, %x6inipagrsp-decodeerr%, %x6inipagrsp-
unspecerr%, %x6inipagrsp-missmandtlv%, %x6inipagrsp-tlvvalinval%, %x6inipagrsp-
unknownntlv%, %x6inipagrsp-duptlvfound%, %x6inipagrsp-nosessfound%, %x6inipagrsp-
adminprohib%, %x6inipagrsp-noresourcedrop%, %x6inipagrsp-
transiderr%, %x6nwexitmsstachareq-totsent%, %x6nwexitmsstachareq-

```

```

retranssent%,%x6nwexitmsstachareq-totsendfail%,%x6nwexitmsstachareq-
totrec%,%x6nwexitmsstachareq-totacc%,%x6nwexitmsstachareq-
totrelay%,%x6nwexitmsstachareq-totdenied%,%x6nwexitmsstachareq-
totdiscard%,%x6nwexitmsstachareq-badform%,%x6nwexitmsstachareq-
decodeerr%,%x6nwexitmsstachareq-unspecerr%,%x6nwexitmsstachareq-
missmandtlv%,%x6nwexitmsstachareq-tlvvalinval%

```

phspc schema phspcSch6 format

```

EMS,PHSPC6,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%x6nwexitmsstacha
req-unknownntlv%,%x6nwexitmsstachareq-duptlvfound%,%x6nwexitmsstachareq-
nosessfound%,%x6nwexitmsstachareq-adminprohib%,%x6nwexitmsstachareq-
noresourcedrop%,%x6nwexitmsstachareq-transiderr%,%x6nwexitmsstacharsp-
totsent%,%x6nwexitmsstacharsp-retranssent%,%x6nwexitmsstacharsp-
totsendfail%,%x6nwexitmsstacharsp-totrec%,%x6nwexitmsstacharsp-
totacc%,%x6nwexitmsstacharsp-totrelay%,%x6nwexitmsstacharsp-
totdenied%,%x6nwexitmsstacharsp-totdiscard%,%x6nwexitmsstacharsp-
badform%,%x6nwexitmsstacharsp-decodeerr%,%x6nwexitmsstacharsp-
unspecerr%,%x6nwexitmsstacharsp-missmandtlv%,%x6nwexitmsstacharsp-
tlvvalinval%,%x6nwexitmsstacharsp-unknownntlv%,%x6nwexitmsstacharsp-
duptlvfound%,%x6nwexitmsstacharsp-nosessfound%,%x6nwexitmsstacharsp-
adminprohib%,%x6nwexitmsstacharsp-noresourcedrop%,%x6nwexitmsstacharsp-
transiderr%,%x6delmsentreq-totsent%,%x6delmsentreq-retranssent%,%x6delmsentreq-
totsendfail%,%x6delmsentreq-totrec%,%x6delmsentreq-totacc%,%x6delmsentreq-
totrelay%,%x6delmsentreq-totdenied%,%x6delmsentreq-totdiscard%,%x6delmsentreq-
badform%,%x6delmsentreq-decodeerr%,%x6delmsentreq-unspecerr%,%x6delmsentreq-
missmandtlv%,%x6delmsentreq-tlvvalinval%,%x6delmsentreq-
unknownntlv%,%x6delmsentreq-duptlvfound%,%x6delmsentreq-
nosessfound%,%x6delmsentreq-adminprohib%,%x6delmsentreq-
noresourcedrop%,%x6delmsentreq-transiderr%,%x6delmsentrsp-
totsent%,%x6delmsentrsp-retranssent%,%x6delmsentrsp-totsendfail%,%x6delmsentrsp-
totrec%,%x6delmsentrsp-totacc%,%x6delmsentrsp-totrelay%,%x6delmsentrsp-
totdenied%,%x6delmsentrsp-totdiscard%,%x6delmsentrsp-badform%,%x6delmsentrsp-
decodeerr%,%x6delmsentrsp-unspecerr%,%x6delmsentrsp-missmandtlv%,%x6delmsentrsp-
tlvvalinval%,%x6delmsentrsp-unknownntlv%

```

phspc schema phspcSch7 format

```

EMS,PHSPC7,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%x6delmsentrsp-
duptlvfound%,%x6delmsentrsp-nosessfound%,%x6delmsentrsp-
adminprohib%,%x6delmsentrsp-noresourcedrop%,%x6delmsentrsp-
transiderr%,%x6anchorpcind-totsent%,%x6anchorpcind-retranssent%,%x6anchorpcind-
totsendfail%,%x6anchorpcind-totrec%,%x6anchorpcind-totacc%,%x6anchorpcind-
totrelay%,%x6anchorpcind-totdenied%,%x6anchorpcind-totdiscard%,%x6anchorpcind-
badform%,%x6anchorpcind-decodeerr%,%x6anchorpcind-unspecerr%,%x6anchorpcind-
missmandtlv%,%x6anchorpcind-tlvvalinval%,%x6anchorpcind-
unknownntlv%,%x6anchorpcind-duptlvfound%,%x6anchorpcind-
nosessfound%,%x6anchorpcind-adminprohib%,%x6anchorpcind-
noresourcedrop%,%x6anchorpcind-transiderr%,%x6anchorpcack-
totsent%,%x6anchorpcack-retranssent%,%x6anchorpcack-totsendfail%,%x6anchorpcack-
totrec%,%x6anchorpcack-totacc%,%x6anchorpcack-totrelay%,%x6anchorpcack-
totdenied%,%x6anchorpcack-totdiscard%,%x6anchorpcack-badform%,%x6anchorpcack-
decodeerr%,%x6anchorpcack-unspecerr%,%x6anchorpcack-missmandtlv%,%x6anchorpcack-
tlvvalinval%,%x6anchorpcack-unknownntlv%,%x6anchorpcack-

```

```

duptlvfound%, %x6anchorpcack-nosessfound%, %x6anchorpcack-
adminprohib%, %x6anchorpcack-noresourcedrop%, %x6anchorpcack-
transiderr%, %x6unknown-totrec%, %x6unknown-totacc%, %x6unknown-
totrelay%, %x6unknown-totdenied%, %x6unknown-totdiscard%, %x6unknown-
badform%, %x6unknown-decodeerr%, %x6unknown-unspecerr%, %x6unknown-
missmandtlv%, %x6unknown-tlvvalinval%, %x6unknown-unknown-tlv%, %x6unknown-
duptlvfound%, %x6unknown-nosessfound%, %x6unknown-adminprohib%, %x6unknown-
noresourcedrop%, %x6unknown-transiderr%, %x5smentstachareq-
congestion%, %x5locregreq-congestion%, %x6smentstachareq-
totsent%, %x6smentstachareq-retranssent%, %x6smentstachareq-
totsendfail%, %x6smentstachareq-totrec%, %x6smentstachareq-totacc%

```

phspc schema phspcSch8 format

```

EMS, PHSPC8, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %x6smentstachareq-
totrelay%, %x6smentstachareq-totdenied%, %x6smentstachareq-
totdiscard%, %x6smentstachareq-badform%, %x6smentstachareq-
decodeerr%, %x6smentstachareq-unspecerr%, %x6smentstachareq-
missmandtlv%, %x6smentstachareq-tlvvalinval%, %x6smentstachareq-
unknown-tlv%, %x6smentstachareq-duptlvfound%, %x6contextreq-totsent%, %x6contextreq-
retranssent%, %x6contextreq-totsendfail%, %x6contextreq-totrec%, %x6contextreq-
totacc%, %x6contextreq-totrelay%, %x6contextreq-totdenied%, %x6contextreq-
totdiscard%, %x6contextreq-badform%, %x6contextreq-decodeerr%, %x6contextreq-
unspecerr%, %x6contextreq-missmandtlv%, %x6contextreq-tlvvalinval%, %x6contextreq-
unknown-tlv%, %x6contextreq-duptlvfound%, %x6contextreq-nosessfound%, %x6contextreq-
adminprohib%, %x6contextreq-noresourcedrop%, %x6contextreq-
transiderr%, %x6contextrepo-totsent%, %x6contextrepo-retranssent%, %x6contextrepo-
totsendfail%, %x6contextrepo-totrec%, %x6contextrepo-totacc%, %x6contextrepo-
totrelay%, %x6contextrepo-totdenied%, %x6contextrepo-totdiscard%, %x6contextrepo-
badform%, %x6contextrepo-decodeerr%, %x6contextrepo-unspecerr%, %x6contextrepo-
missmandtlv%, %x6contextrepo-tlvvalinval%, %x6contextrepo-
unknown-tlv%, %x6contextrepo-duptlvfound%, %x6contextrepo-
nosessfound%, %x6contextrepo-adminprohib%, %x6contextrepo-
noresourcedrop%, %x6contextrepo-transiderr%, %x5smentstachaack-
adminprohib%, %x5smentstachaack-badform%, %x5smentstachaack-
decodeerr%, %x5smentstachaack-duptlvfound%, %x5smentstachaack-
missmandtlv%, %x5smentstachaack-noresourcedrop%, %x5smentstachaack-
nosessfound%, %x5smentstachaack-tlvvalinval%, %x5smentstachaack-
totdenied%, %x5smentstachaack-totdiscard%, %x5smentstachaack-
totrelay%, %x5smentstachaack-unknown-tlv%, %x5smentstachaack-unspecerr%, %total-
sessions-connected%

```

phsgw schema phsgw1 format

```

EMS, PHSGW1, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %x1mspreattreq-
totsent%, %x1mspreattreq-retranssent%, %x1mspreattreq-totsendfail%, %x1mspreattreq-
totrec%, %x1mspreattreq-totacc%, %x1mspreattreq-totrelay%, %x1mspreattreq-
totdenied%, %x1mspreattreq-totdiscard%, %x1mspreattreq-badform%, %x1mspreattreq-
decodeerr%, %x1mspreattreq-unspecerr%, %x1mspreattreq-missmandtlv%, %x1mspreattreq-
tlvvalinval%, %x1mspreattreq-unknown-tlv%, %x1mspreattreq-
duptlvfound%, %x1mspreattreq-nosessfound%, %x1mspreattreq-
adminprohib%, %x1mspreattreq-noresourcedrop%, %x1mspreattreq-
transiderr%, %x1mspreattrsp-totsent%, %x1mspreattrsp-retranssent%, %x1mspreattrsp-
totsendfail%, %x1mspreattrsp-totrec%, %x1mspreattrsp-totacc%, %x1mspreattrsp-

```

```

totrelay%,%xlmspreattrsp-totdenied%,%xlmspreattrsp-totdiscard%,%xlmspreattrsp-
badform%,%xlmspreattrsp-decodeerr%,%xlmspreattrsp-unspecerr%,%xlmspreattrsp-
missmandtlv%,%xlmspreattrsp-tlvvalinval%,%xlmspreattrsp-
unknownntlv%,%xlmspreattrsp-duptlvfound%,%xlmspreattrsp-
nosessfound%,%xlmspreattrsp-adminprohib%,%xlmspreattrsp-
noresourcedrop%,%xlmspreattrsp-transiderr%,%xlmspreattack-
totsent%,%xlmspreattack-retranssent%,%xlmspreattack-totsendfail%,%xlmspreattack-
totrec%,%xlmspreattack-totacc%,%xlmspreattack-totrelay%,%xlmspreattack-
totdenied%,%xlmspreattack-totdiscard%,%xlmspreattack-badform%,%xlmspreattack-
decodeerr%,%xlmspreattack-unspecerr%,%xlmspreattack-missmandtlv%,%xlmspreattack-
tlvvalinval%,%xlmspreattack-unknownntlv%,%xlmspreattack-
duptlvfound%,%xlmspreattack-nosessfound%,%xlmspreattack-
adminprohib%,%xlmspreattack-noresourcedrop%,%xlmspreattack-
transiderr%,%xlnwexitmsstachareq-totsent%,%xlnwexitmsstachareq-
retranssent%,%xlnwexitmsstachareq-totsendfail%,%xlnwexitmsstachareq-
totrec%,%xlnwexitmsstachareq-totacc%,%xlnwexitmsstachareq-totrelay%

```

phsgw schema phsgw2 format

```

EMS,PHSGW2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%xlnwexitmsstacha
req-totdenied%,%xlnwexitmsstachareq-totdiscard%,%xlnwexitmsstachareq-
badform%,%xlnwexitmsstachareq-decodeerr%,%xlnwexitmsstachareq-
unspecerr%,%xlnwexitmsstachareq-missmandtlv%,%xlnwexitmsstachareq-
tlvvalinval%,%xlnwexitmsstachareq-unknownntlv%,%xlnwexitmsstachareq-
duptlvfound%,%xlnwexitmsstachareq-nosessfound%,%xlnwexitmsstachareq-
adminprohib%,%xlnwexitmsstachareq-noresourcedrop%,%xlnwexitmsstachareq-
transiderr%,%xlnwexitmsstacharsp-totsent%,%xlnwexitmsstacharsp-
retranssent%,%xlnwexitmsstacharsp-totsendfail%,%xlnwexitmsstacharsp-
totrec%,%xlnwexitmsstacharsp-totacc%,%xlnwexitmsstacharsp-
totrelay%,%xlnwexitmsstacharsp-totdenied%,%xlnwexitmsstacharsp-
totdiscard%,%xlnwexitmsstacharsp-badform%,%xlnwexitmsstacharsp-
decodeerr%,%xlnwexitmsstacharsp-unspecerr%,%xlnwexitmsstacharsp-
missmandtlv%,%xlnwexitmsstacharsp-tlvvalinval%,%xlnwexitmsstacharsp-
unknownntlv%,%xlnwexitmsstacharsp-duptlvfound%,%xlnwexitmsstacharsp-
nosessfound%,%xlnwexitmsstacharsp-adminprohib%,%xlnwexitmsstacharsp-
noresourcedrop%,%xlnwexitmsstacharsp-transiderr%,%xlautheaptra-
totsent%,%xlautheaptra-retranssent%,%xlautheaptra-totsendfail%,%xlautheaptra-
totrec%,%xlautheaptra-totacc%,%xlautheaptra-totrelay%,%xlautheaptra-
totdenied%,%xlautheaptra-totdiscard%,%xlautheaptra-badform%,%xlautheaptra-
decodeerr%,%xlautheaptra-unspecerr%,%xlautheaptra-missmandtlv%,%xlautheaptra-
tlvvalinval%,%xlautheaptra-unknownntlv%,%xlautheaptra-duptlvfound%,%xlautheaptra-
nosessfound%,%xlautheaptra-adminprohib%,%xlautheaptra-
noresourcedrop%,%xlautheaptra-transiderr%,%xlautheapsta-totrec%,%xlautheapsta-
totacc%,%xlautheapsta-totrelay%,%xlautheapsta-totdenied%,%xlautheapsta-
totdiscard%,%xlautheapsta-badform%,%xlautheapsta-decodeerr%

```

phsgw schema phsgw3 format

```

EMS,PHSGW3,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%xlautheapsta-
unspecerr%,%xlautheapsta-missmandtlv%,%xlautheapsta-tlvvalinval%,%xlautheapsta-
unknownntlv%,%xlautheapsta-duptlvfound%,%xlautheapsta-nosessfound%,%xlautheapsta-
adminprohib%,%xlautheapsta-noresourcedrop%,%xlautheapsta-
transiderr%,%xlmsattreq-totsent%,%xlmsattreq-retranssent%,%xlmsattreq-
totsendfail%,%xlmsattreq-totrec%,%xlmsattreq-totacc%,%xlmsattreq-

```

```

totrelay%,%x1msattreq-totdenied%,%x1msattreq-totdiscard%,%x1msattreq-
badform%,%x1msattreq-decodeerr%,%x1msattreq-unspecerr%,%x1msattreq-
missmandtlv%,%x1msattreq-tlvvalinval%,%x1msattreq-unknownntlv%,%x1msattreq-
duptlvfound%,%x1msattreq-nosessfound%,%x1msattreq-adminprohib%,%x1msattreq-
noresourcedrop%,%x1msattreq-transiderr%,%x1msattrsp-totsent%,%x1msattrsp-
retranssent%,%x1msattrsp-totseendfail%,%x1msattrsp-totrec%,%x1msattrsp-
totacc%,%x1msattrsp-totrelay%,%x1msattrsp-totdenied%,%x1msattrsp-
totdiscard%,%x1msattrsp-badform%,%x1msattrsp-decodeerr%,%x1msattrsp-
unspecerr%,%x1msattrsp-missmandtlv%,%x1msattrsp-tlvvalinval%,%x1msattrsp-
unknownntlv%,%x1msattrsp-duptlvfound%,%x1msattrsp-nosessfound%,%x1msattrsp-
adminprohib%,%x1msattrsp-noresourcedrop%,%x1msattrsp-transiderr%,%x1msattack-
totsent%,%x1msattack-retranssent%,%x1msattack-totseendfail%,%x1msattack-
totrec%,%x1msattack-totacc%,%x1msattack-totrelay%,%x1msattack-
totdenied%,%x1msattack-totdiscard%,%x1msattack-badform%,%x1msattack-
decodeerr%,%x1msattack-unspecerr%,%x1msattack-missmandtlv%,%x1msattack-
tlvvalinval%,%x1msattack-unknownntlv%,%x1msattack-duptlvfound%,%x1msattack-
nosessfound%,%x1msattack-adminprohib%,%x1msattack-noresourcedrop%,%x1msattack-
transiderr%,%x1datapathpreregreq-totsent%,%x1datapathpreregreq-
retranssent%,%x1datapathpreregreq-totseendfail%,%x1datapathpreregreq-totrec%

```

phsgw schema phsgw4 format

```

EMS,PHSGW4,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%x1datapathprereg-
req-totacc%,%x1datapathpreregreq-totrelay%,%x1datapathpreregreq-
totdenied%,%x1datapathpreregreq-totdiscard%,%x1datapathpreregreq-
badform%,%x1datapathpreregreq-decodeerr%,%x1datapathpreregreq-
unspecerr%,%x1datapathpreregreq-missmandtlv%,%x1datapathpreregreq-
tlvvalinval%,%x1datapathpreregreq-unknownntlv%,%x1datapathpreregreq-
duptlvfound%,%x1datapathpreregreq-nosessfound%,%x1datapathpreregreq-
adminprohib%,%x1datapathpreregreq-noresourcedrop%,%x1datapathpreregreq-
transiderr%,%x1datapathpreregreq-totsent%,%x1datapathpreregreq-
retranssent%,%x1datapathpreregreq-totseendfail%,%x1datapathpreregreq-
totrec%,%x1datapathpreregreq-totacc%,%x1datapathpreregreq-
totrelay%,%x1datapathpreregreq-totdenied%,%x1datapathpreregreq-
totdiscard%,%x1datapathpreregreq-badform%,%x1datapathpreregreq-
decodeerr%,%x1datapathpreregreq-unspecerr%,%x1datapathpreregreq-
missmandtlv%,%x1datapathpreregreq-tlvvalinval%,%x1datapathpreregreq-
unknownntlv%,%x1datapathpreregreq-duptlvfound%,%x1datapathpreregreq-
nosessfound%,%x1datapathpreregreq-adminprohib%,%x1datapathpreregreq-
noresourcedrop%,%x1datapathpreregreq-transiderr%,%x1datapathpreregack-
totsent%,%x1datapathpreregack-retranssent%,%x1datapathpreregack-
totseendfail%,%x1datapathpreregack-totrec%,%x1datapathpreregack-
totacc%,%x1datapathpreregack-totrelay%,%x1datapathpreregack-
totdenied%,%x1datapathpreregack-totdiscard%,%x1datapathpreregack-
badform%,%x1datapathpreregack-decodeerr%,%x1datapathpreregack-
unspecerr%,%x1datapathpreregack-missmandtlv%,%x1datapathpreregack-
tlvvalinval%,%x1datapathpreregack-unknownntlv%,%x1datapathpreregack-
duptlvfound%,%x1datapathpreregack-nosessfound%,%x1datapathpreregack-
adminprohib%,%x1datapathpreregack-noresourcedrop%

```

phsgw schema phsgw5 format

```

EMS,PHSGW5,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%x1datapathprereg-
ack-transiderr%,%x1datapathregreq-totsent%,%x1datapathregreq-

```

```

retranssent%,%xldatapathregreq-totsendfail%,%xldatapathregreq-
totrec%,%xldatapathregreq-totacc%,%xldatapathregreq-totrelay%,%xldatapathregreq-
totdenied%,%xldatapathregreq-totdiscard%,%xldatapathregreq-
badform%,%xldatapathregreq-decodeerr%,%xldatapathregreq-
unspecerr%,%xldatapathregreq-missmandtlv%,%xldatapathregreq-
tlvvalinval%,%xldatapathregreq-unknownntlv%,%xldatapathregreq-
duptlvfound%,%xldatapathregreq-nosessfound%,%xldatapathregreq-
adminprohib%,%xldatapathregreq-noresourcedrop%,%xldatapathregreq-
transiderr%,%xldatapathregrsp-totsent%,%xldatapathregrsp-
retranssent%,%xldatapathregrsp-totsendfail%,%xldatapathregrsp-
totrec%,%xldatapathregrsp-totacc%,%xldatapathregrsp-totrelay%,%xldatapathregrsp-
totdenied%,%xldatapathregrsp-totdiscard%,%xldatapathregrsp-
badform%,%xldatapathregrsp-decodeerr%,%xldatapathregrsp-
unspecerr%,%xldatapathregrsp-missmandtlv%,%xldatapathregrsp-
tlvvalinval%,%xldatapathregrsp-unknownntlv%,%xldatapathregrsp-
duptlvfound%,%xldatapathregrsp-nosessfound%,%xldatapathregrsp-
adminprohib%,%xldatapathregrsp-noresourcedrop%,%xldatapathregrsp-
transiderr%,%xldatapathregack-totsent%,%xldatapathregack-
retranssent%,%xldatapathregack-totsendfail%,%xldatapathregack-
totrec%,%xldatapathregack-totacc%,%xldatapathregack-totrelay%,%xldatapathregack-
totdenied%,%xldatapathregack-totdiscard%,%xldatapathregack-
badform%,%xldatapathregack-decodeerr%,%xldatapathregack-
unspecerr%,%xldatapathregack-missmandtlv%,%xldatapathregack-
tlvvalinval%,%xldatapathregack-unknownntlv%,%xldatapathregack-
duptlvfound%,%xldatapathregack-nosessfound%,%xldatapathregack-
adminprohib%,%xldatapathregack-noresourcedrop%,%xldatapathregack-transiderr%

```

phsgw schema phsgw6 format

```

EMS,PHSGW6,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%xldatapathdereg-
req-totsent%,%xldatapathderegreq-retranssent%,%xldatapathderegreq-
totsendfail%,%xldatapathderegreq-totrec%,%xldatapathderegreq-
totacc%,%xldatapathderegreq-totrelay%,%xldatapathderegreq-
totdenied%,%xldatapathderegreq-totdiscard%,%xldatapathderegreq-
badform%,%xldatapathderegreq-decodeerr%,%xldatapathderegreq-
unspecerr%,%xldatapathderegreq-missmandtlv%,%xldatapathderegreq-
tlvvalinval%,%xldatapathderegreq-unknownntlv%,%xldatapathderegreq-
duptlvfound%,%xldatapathderegreq-nosessfound%,%xldatapathderegreq-
adminprohib%,%xldatapathderegreq-noresourcedrop%,%xldatapathderegreq-
transiderr%,%xldatapathderegrrsp-totsent%,%xldatapathderegrrsp-
retranssent%,%xldatapathderegrrsp-totsendfail%,%xldatapathderegrrsp-
totrec%,%xldatapathderegrrsp-totacc%,%xldatapathderegrrsp-
totrelay%,%xldatapathderegrrsp-totdenied%,%xldatapathderegrrsp-
totdiscard%,%xldatapathderegrrsp-badform%,%xldatapathderegrrsp-
decodeerr%,%xldatapathderegrrsp-unspecerr%,%xldatapathderegrrsp-
missmandtlv%,%xldatapathderegrrsp-tlvvalinval%,%xldatapathderegrrsp-
unknownntlv%,%xldatapathderegrrsp-duptlvfound%,%xldatapathderegrrsp-
nosessfound%,%xldatapathderegrrsp-adminprohib%,%xldatapathderegrrsp-
noresourcedrop%,%xldatapathderegrrsp-transiderr%,%x1keychadir-
totsent%,%x1keychadir-retranssent%,%x1keychadir-totsendfail%,%x1keychadir-
totrec%,%x1keychadir-totacc%,%x1keychadir-totrelay%,%x1keychadir-
totdenied%,%x1keychadir-totdiscard%,%x1keychadir-badform%,%x1keychadir-
decodeerr%,%x1keychadir-unspecerr%,%x1keychadir-missmandtlv%,%x1keychadir-

```

```
tlvvalinval%,%x1keychadir-unknown%tlv%,%x1keychadir-duptlvfound%,%x1keychadir-
nosessfound%,%x1keychadir-adminprohib%,%x1keychadir-
noresourcedrop%,%x1keychadir-transiderr%,%x1keychaack-totsent%,%x1keychaack-
retranssent%
```

phsgw schema phsgw7 format

```
EMS,PHSGW7,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%x1keychaack-
totsendfail%,%x1keychaack-totrec%,%x1keychaack-totacc%,%x1keychaack-
totrelay%,%x1keychaack-totdenied%,%x1keychaack-totdiscard%,%x1keychaack-
badform%,%x1keychaack-decodeerr%,%x1keychaack-unspecerr%,%x1keychaack-
missmandtlv%,%x1keychaack-tlvvalinval%,%x1keychaack-unknown%tlv%,%x1keychaack-
duptlvfound%,%x1keychaack-nosessfound%,%x1keychaack-adminprohib%,%x1keychaack-
noresourcedrop%,%x1keychaack-transiderr%,%x1keychacnf-totrec%,%x1keychacnf-
totacc%,%x1keychacnf-totrelay%,%x1keychacnf-totdenied%,%x1keychacnf-
totdiscard%,%x1keychacnf-badform%,%x1keychacnf-decodeerr%,%x1keychacnf-
unspecerr%,%x1keychacnf-missmandtlv%,%x1keychacnf-tlvvalinval%,%x1keychacnf-
unknown%tlv%,%x1keychacnf-duptlvfound%,%x1keychacnf-nosessfound%,%x1keychacnf-
adminprohib%,%x1keychacnf-nosourcedrop%,%x1keychacnf-transiderr%,%x1horeq-
totsent%,%x1horeq-retranssent%,%x1horeq-totsendfail%,%x1horeq-totrec%,%x1horeq-
totacc%,%x1horeq-totrelay%,%x1horeq-totdenied%,%x1horeq-totdiscard%,%x1horeq-
badform%,%x1horeq-decodeerr%,%x1horeq-unspecerr%,%x1horeq-missmandtlv%,%x1horeq-
tlvvalinval%,%x1horeq-unknown%tlv%,%x1horeq-duptlvfound%,%x1horeq-
nosessfound%,%x1horeq-adminprohib%,%x1horeq-nosourcedrop%,%x1horeq-
transiderr%,%x1horsp-totsent%,%x1horsp-retranssent%,%x1horsp-
totsendfail%,%x1horsp-totrec%,%x1horsp-totacc%,%x1horsp-totrelay%,%x1horsp-
totdenied%,%x1horsp-totdiscard%,%x1horsp-badform%,%x1horsp-decodeerr%,%x1horsp-
unspecerr%,%x1horsp-missmandtlv%,%x1horsp-tlvvalinval%,%x1horsp-
unknown%tlv%,%x1horsp-duptlvfound%,%x1horsp-nosessfound%,%x1horsp-
adminprohib%,%x1horsp-nosourcedrop%,%x1horsp-transiderr%,%x1hoack-
totsent%,%x1hoack-retranssent%,%x1hoack-totsendfail%,%x1hoack-totrec%,%x1hoack-
totacc%,%x1hoack-totrelay%
```

phsgw schema phsgw8 format

```
EMS,PHSGW8,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%x1hoack-
totdenied%,%x1hoack-totdiscard%,%x1hoack-badform%,%x1hoack-decodeerr%,%x1hoack-
unspecerr%,%x1hoack-missmandtlv%,%x1hoack-tlvvalinval%,%x1hoack-
unknown%tlv%,%x1hoack-duptlvfound%,%x1hoack-nosessfound%,%x1hoack-
adminprohib%,%x1hoack-nosourcedrop%,%x1hoack-transiderr%,%x1unknown-
totrec%,%x1unknown-totacc%,%x1unknown-totrelay%,%x1unknown-
totdenied%,%x1unknown-totdiscard%,%x1unknown-badform%,%x1unknown-
decodeerr%,%x1unknown-unspecerr%,%x1unknown-missmandtlv%,%x1unknown-
tlvvalinval%,%x1unknown-unknown%tlv%,%x1unknown-duptlvfound%,%x1unknown-
nosessfound%,%x1unknown-adminprohib%,%x1unknown-nosourcedrop%,%x1unknown-
transiderr%,%x1datagrerec-totpackrec%,%x1datagrerec-
prottyperror%,%x1datagrerec-totbytrec%,%x1datagrerec-grekeyabs%,%x1datagrerec-
grechkerr%,%x1datagrerec-invpacklen%,%x1datagrerec-nosessfou%,%x1datagrerec-
unspecerr%,%x1datagresend-totpacksent%,%x1datagresend-senderr%,%x1datagresend-
totbytssent%,%x1datagresend-unspeerr%,%x1datagreeapolrec-
totpackrec%,%x1datagreeapolrec-prottyperror%,%x1datagreeapolrec-
totbytrec%,%x1datagreeapolrec-start%,%x1datagreeapolrec-
packet%,%x1datagreeapolrec-invpacklen%,%x1datagreeapolrec-
nosessfou%,%x1datagreeapolrec-unspecerr%,%x1datagreeapolsend-
```

```

totpacksent%,%x1datagreeapolsend-senderr%,%x1datagreeapolsend-
totbytssent%,%x1datagreeapolsend-unspeerr%,%x6nwexitmsstachareq-
totsent%,%x6nwexitmsstachareq-retranssent%,%x6nwexitmsstachareq-
totsendfail%,%x6nwexitmsstachareq-totrec%,%x6nwexitmsstachareq-
totacc%,%x6nwexitmsstachareq-totrelay%,%x6nwexitmsstachareq-
totdenied%,%x6nwexitmsstachareq-totdiscard%,%x6nwexitmsstachareq-
badform%,%x6nwexitmsstachareq-decodeerr%,%x6nwexitmsstachareq-
unspecerr%,%x6nwexitmsstachareq-missmandtlv%,%x6nwexitmsstachareq-tlvvalinval%

```

phsgw schema phsgw9 format

```

EMS, PHSGW9, %date%, %time%, %vpnnname%, %vpnid%, %servname%, %servid%, %x6nwexitmsstacha
req-unknownntlv%, %x6nwexitmsstachareq-duptlvfound%, %x6nwexitmsstachareq-
nosessfound%, %x6nwexitmsstachareq-adminprohib%, %x6nwexitmsstachareq-
noresourcedrop%, %x6nwexitmsstachareq-transiderr%, %x6nwexitmsstacharsp-
totsent%, %x6nwexitmsstacharsp-retranssent%, %x6nwexitmsstacharsp-
totsendfail%, %x6nwexitmsstacharsp-totrec%, %x6nwexitmsstacharsp-
totacc%, %x6nwexitmsstacharsp-totrelay%, %x6nwexitmsstacharsp-
totdenied%, %x6nwexitmsstacharsp-totdiscard%, %x6nwexitmsstacharsp-
badform%, %x6nwexitmsstacharsp-decodeerr%, %x6nwexitmsstacharsp-
unspecerr%, %x6nwexitmsstacharsp-missmandtlv%, %x6nwexitmsstacharsp-
tlvvalinval%, %x6nwexitmsstacharsp-unknownntlv%, %x6nwexitmsstacharsp-
duptlvfound%, %x6nwexitmsstacharsp-nosessfound%, %x6nwexitmsstacharsp-
adminprohib%, %x6nwexitmsstacharsp-noresourcedrop%, %x6nwexitmsstacharsp-
transiderr%, %x6contextreq-totsent%, %x6contextreq-retranssent%, %x6contextreq-
totsendfail%, %x6contextreq-totrec%, %x6contextreq-totacc%, %x6contextreq-
totrelay%, %x6contextreq-totdenied%, %x6contextreq-totdiscard%, %x6contextreq-
badform%, %x6contextreq-decodeerr%, %x6contextreq-unspecerr%, %x6contextreq-
missmandtlv%, %x6contextreq-tlvvalinval%, %x6contextreq-unknownntlv%, %x6contextreq-
duptlvfound%, %x6contextreq-nosessfound%, %x6contextreq-
adminprohib%, %x6contextrepo-totsent%, %x6contextrepo-retranssent%, %x6contextrepo-
totsendfail%, %x6contextrepo-totrec%, %x6contextrepo-totacc%, %x6contextrepo-
totrelay%, %x6contextrepo-totdenied%, %x6contextrepo-totdiscard%, %x6contextrepo-
badform%, %x6contextrepo-decodeerr%, %x6contextrepo-unspecerr%, %x6contextrepo-
missmandtlv%, %x6contextrepo-tlvvalinval%, %x6contextrepo-
unknownntlv%, %x6contextrepo-duptlvfound%

```

phsgw schema phsgwA format

```

EMS, PHSGWA, %date%, %time%, %vpnnname%, %vpnid%, %servname%, %servid%, %x6contextrepo-
nosessfound%, %x6contextrepo-adminprohib%, %x6contextrepo-
noresourcedrop%, %x6contextrepo-transiderr%, %x2autheaptra-totsent%, %x2autheaptra-
retranssent%, %x2autheaptra-totsendfail%, %x2autheaptra-totrec%, %x2autheaptra-
totacc%, %x2autheaptra-totrelay%, %x2autheaptra-totdenied%, %x2autheaptra-
totdiscard%, %x2autheaptra-badform%, %x2autheaptra-decodeerr%, %x2autheaptra-
unspecerr%, %x2autheaptra-missmandtlv%, %x2autheaptra-tlvvalinval%, %x2autheaptra-
unknownntlv%, %x2autheaptra-duptlvfound%, %x2autheaptra-nosessfound%, %x2autheaptra-
adminprohib%, %x2autheaptra-noresourcedrop%, %x2autheaptra-
transiderr%, %x2autheapsta-totrec%, %x2autheapsta-totacc%, %x2autheapsta-
totrelay%, %x2autheapsta-totdenied%, %x2autheapsta-totdiscard%, %x2autheapsta-
badform%, %x2autheapsta-decodeerr%, %x2autheapsta-unspecerr%, %x2autheapsta-
missmandtlv%, %x2autheapsta-tlvvalinval%, %x2autheapsta-unknownntlv%, %x2autheapsta-
duptlvfound%, %x2autheapsta-nosessfound%, %x2autheapsta-

```

```

adminprohib%, %x2autheapsta-noresourcedrop%, %x2autheapsta-
transiderr%, %x2datapathpreregreq-totsent%, %x2datapathpreregreq-
retranssent%, %x2datapathpreregreq-totseendfail%, %x2datapathpreregreq-
totrec%, %x2datapathpreregreq-totacc%, %x2datapathpreregreq-
totrelay%, %x2datapathpreregreq-totdenied%, %x2datapathpreregreq-
totdiscard%, %x2datapathpreregreq-badform%, %x2datapathpreregreq-
decodeerr%, %x2datapathpreregreq-unspecerr%, %x2datapathpreregreq-
missmandtlv%, %x2datapathpreregreq-tlvvalinval%, %x2datapathpreregreq-
unknownntlv%, %x2datapathpreregreq-duptlvfound%, %x2datapathpreregreq-
nosessfound%, %x2datapathpreregreq-adminprohib%, %x2datapathpreregreq-
noresourcedrop%, %x2datapathpreregreq-transiderr%, %x2datapathpreregreq-
totsent%, %x2datapathpreregreq-retranssent%, %x2datapathpreregreq-totseendfail%

```

#### phsgw schema phsgwB format

```

EMS, PHSGWB, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %x2datapathprereg-
rsp-totrec%, %x2datapathpreregreq-totacc%, %x2datapathpreregreq-
totrelay%, %x2datapathpreregreq-totdenied%, %x2datapathpreregreq-
totdiscard%, %x2datapathpreregreq-badform%, %x2datapathpreregreq-
decodeerr%, %x2datapathpreregreq-unspecerr%, %x2datapathpreregreq-
missmandtlv%, %x2datapathpreregreq-tlvvalinval%, %x2datapathpreregreq-
unknownntlv%, %x2datapathpreregreq-duptlvfound%, %x2datapathpreregreq-
nosessfound%, %x2datapathpreregreq-adminprohib%, %x2datapathpreregreq-
noresourcedrop%, %x2datapathpreregreq-transiderr%, %x2datapathpreregack-
totsent%, %x2datapathpreregack-retranssent%, %x2datapathpreregack-
totseendfail%, %x2datapathpreregack-totrec%, %x2datapathpreregack-
totacc%, %x2datapathpreregack-totrelay%, %x2datapathpreregack-
totdenied%, %x2datapathpreregack-totdiscard%, %x2datapathpreregack-
badform%, %x2datapathpreregack-decodeerr%, %x2datapathpreregack-
unspecerr%, %x2datapathpreregack-missmandtlv%, %x2datapathpreregack-
tlvvalinval%, %x2datapathpreregack-unknownntlv%, %x2datapathpreregack-
duptlvfound%, %x2datapathpreregack-nosessfound%, %x2datapathpreregack-
adminprohib%, %x2datapathpreregack-noresourcedrop%, %x2datapathpreregack-
transiderr%, %x2datapathregreq-totsent%, %x2datapathregreq-
retranssent%, %x2datapathregreq-totseendfail%, %x2datapathregreq-
totrec%, %x2datapathregreq-totacc%, %x2datapathregreq-totrelay%, %x2datapathregreq-
totdenied%, %x2datapathregreq-totdiscard%, %x2datapathregreq-
badform%, %x2datapathregreq-decodeerr%, %x2datapathregreq-
unspecerr%, %x2datapathregreq-missmandtlv%, %x2datapathregreq-
tlvvalinval%, %x2datapathregreq-unknownntlv%, %x2datapathregreq-
duptlvfound%, %x2datapathregreq-nosessfound%, %x2datapathregreq-
adminprohib%, %x2datapathregreq-noresourcedrop%, %x2datapathregreq-transiderr%

```

#### phsgw schema phsgwC format

```

EMS, PHSGWC, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %x2datapathregrsp-
-totsent%, %x2datapathregrsp-retranssent%, %x2datapathregrsp-
totseendfail%, %x2datapathregrsp-totrec%, %x2datapathregrsp-
totacc%, %x2datapathregrsp-totrelay%, %x2datapathregrsp-
totdenied%, %x2datapathregrsp-totdiscard%, %x2datapathregrsp-
badform%, %x2datapathregrsp-decodeerr%, %x2datapathregrsp-
unspecerr%, %x2datapathregrsp-missmandtlv%, %x2datapathregrsp-
tlvvalinval%, %x2datapathregrsp-unknownntlv%, %x2datapathregrsp-
duptlvfound%, %x2datapathregrsp-nosessfound%, %x2datapathregrsp-

```

```

adminprohib%, %x2datapathregrsp-noresourcedrop%, %x2datapathregrsp-
transiderr%, %x2datapathregack-totsent%, %x2datapathregack-
retranssent%, %x2datapathregack-totsendfail%, %x2datapathregack-
totrec%, %x2datapathregack-totacc%, %x2datapathregack-totrelay%, %x2datapathregack-
totdenied%, %x2datapathregack-totdiscard%, %x2datapathregack-
badform%, %x2datapathregack-decodeerr%, %x2datapathregack-
unspecerr%, %x2datapathregack-missmandtlv%, %x2datapathregack-
tlvvalinval%, %x2datapathregack-unknownntlv%, %x2datapathregack-
duptlvfound%, %x2datapathregack-nosessfound%, %x2datapathregack-
adminprohib%, %x2datapathregack-noresourcedrop%, %x2datapathregack-
transiderr%, %x2datapathderegreq-totsent%, %x2datapathderegreq-
retranssent%, %x2datapathderegreq-totsendfail%, %x2datapathderegreq-
totrec%, %x2datapathderegreq-totacc%, %x2datapathderegreq-
totrelay%, %x2datapathderegreq-totdenied%, %x2datapathderegreq-
totdiscard%, %x2datapathderegreq-badform%, %x2datapathderegreq-
decodeerr%, %x2datapathderegreq-unspecerr%, %x2datapathderegreq-
missmandtlv%, %x2datapathderegreq-tlvvalinval%, %x2datapathderegreq-
unknownntlv%, %x2datapathderegreq-duptlvfound%, %x2datapathderegreq-
nosessfound%, %x2datapathderegreq-adminprohib%, %x2datapathderegreq-
noresourcedrop%, %x2datapathderegreq-transiderr%

```

phsgw schema phsgwD format

```

EMS, PHSGWD, %date%, %time%, %vpnnname%, %vpnid%, %servname%, %servid%, %x2datapathdereg-
sp-totsent%, %x2datapathderegsp-retranssent%, %x2datapathderegsp-
totsendfail%, %x2datapathderegsp-totrec%, %x2datapathderegsp-
totacc%, %x2datapathderegsp-totrelay%, %x2datapathderegsp-
totdenied%, %x2datapathderegsp-totdiscard%, %x2datapathderegsp-
badform%, %x2datapathderegsp-decodeerr%, %x2datapathderegsp-
unspecerr%, %x2datapathderegsp-missmandtlv%, %x2datapathderegsp-
tlvvalinval%, %x2datapathderegsp-unknownntlv%, %x2datapathderegsp-
duptlvfound%, %x2datapathderegsp-nosessfound%, %x2datapathderegsp-
adminprohib%, %x2datapathderegsp-noresourcedrop%, %x2datapathderegsp-
transiderr%, %x2keychadir-totsent%, %x2keychadir-retranssent%, %x2keychadir-
totsendfail%, %x2keychadir-totrec%, %x2keychadir-totacc%, %x2keychadir-
totrelay%, %x2keychadir-totdenied%, %x2keychadir-totdiscard%, %x2keychadir-
badform%, %x2keychadir-decodeerr%, %x2keychadir-unspecerr%, %x2keychadir-
missmandtlv%, %x2keychadir-tlvvalinval%, %x2keychadir-unknownntlv%, %x2keychadir-
duptlvfound%, %x2keychadir-nosessfound%, %x2keychadir-adminprohib%, %x2keychadir-
noresourcedrop%, %x2keychadir-transiderr%, %x2keychaack-totsent%, %x2keychaack-
retranssent%, %x2keychaack-totsendfail%, %x2keychaack-totrec%, %x2keychaack-
totacc%, %x2keychaack-totrelay%, %x2keychaack-totdenied%, %x2keychaack-
totdiscard%, %x2keychaack-badform%, %x2keychaack-decodeerr%, %x2keychaack-
unspecerr%, %x2keychaack-missmandtlv%, %x2keychaack-tlvvalinval%, %x2keychaack-
unknownntlv%, %x2keychaack-duptlvfound%, %x2keychaack-nosessfound%, %x2keychaack-
adminprohib%, %x2keychaack-noresourcedrop%, %x2keychaack-transiderr%, %x2keychacnf-
totrec%, %x2keychacnf-totacc%, %x2keychacnf-totrelay%, %x2keychacnf-
totdenied%, %x2keychacnf-totdiscard%, %x2keychacnf-badform%, %x2keychacnf-
decodeerr%, %x2keychacnf-unspecerr%

```

phsgw schema phsgwE format

```

EMS, PHSGWE, %date%, %time%, %vpnnname%, %vpnid%, %servname%, %servid%, %x2keychacnf-
missmandtlv%, %x2keychacnf-tlvvalinval%, %x2keychacnf-unknownntlv%, %x2keychacnf-

```

```

duptlvfound%, %x2keychacnf-nosessfound%, %x2keychacnf-adminprohib%, %x2keychacnf-
noresourcedrop%, %x2keychacnf-transiderr%, %x6smentstachareq-
totsent%, %x6smentstachareq-retranssent%, %x6smentstachareq-
totsendfail%, %x6smentstachareq-totrec%, %x6smentstachareq-
totacc%, %x6smentstachareq-totrelay%, %x6smentstachareq-
totdenied%, %x6smentstachareq-totdiscard%, %x6smentstachareq-
badform%, %x6smentstachareq-decodeerr%, %x6smentstachareq-
unspecerr%, %x6smentstachareq-missmandtlv%, %x6smentstachareq-
tlvvalinval%, %x6smentstachareq-unknownntlv%, %x6smentstachareq-
duptlvfound%, %x6smentstachareq-nosessfound%, %x6smentstachareq-
adminprohib%, %x6smentstachareq-noresourcedrop%, %x6smentstachareq-
transiderr%, %x6smentstacharsp-totsent%, %x6smentstacharsp-
retranssent%, %x6smentstacharsp-totsendfail%, %x6smentstacharsp-
totrec%, %x6smentstacharsp-totacc%, %x6smentstacharsp-totrelay%, %x6smentstacharsp-
totdenied%, %x6smentstacharsp-totdiscard%, %x6smentstacharsp-
badform%, %x6smentstacharsp-decodeerr%, %x6smentstacharsp-
unspecerr%, %x6smentstacharsp-missmandtlv%, %x6smentstacharsp-
tlvvalinval%, %x6smentstacharsp-unknownntlv%, %x6smentstacharsp-
duptlvfound%, %x6smentstacharsp-nosessfound%, %x6smentstacharsp-
adminprohib%, %x6smentstacharsp-noresourcedrop%, %x6smentstacharsp-
transiderr%, %x6smentstachaack-totsent%, %x6smentstachaack-
retranssent%, %x6smentstachaack-totsendfail%, %x6smentstachaack-
totrec%, %x6smentstachaack-totacc%, %x6smentstachaack-totrelay%, %x6smentstachaack-
totdenied%, %x6smentstachaack-totdiscard%, %x6smentstachaack-
badform%, %x6smentstachaack-decodeerr%, %x6smentstachaack-
unspecerr%, %x6smentstachaack-missmandtlv%, %x6smentstachaack-tlvvalinval%

```

phsgw schema phsgwF format

```

EMS, PHSGWF, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %x6smentstachaack-
unknownntlv%, %x6smentstachaack-duptlvfound%, %x6smentstachaack-
nosessfound%, %x6smentstachaack-adminprohib%, %x6smentstachaack-
noresourcedrop%, %x6smentstachaack-transiderr%, %x6anchorpcind-
totsent%, %x6anchorpcind-retranssent%, %x6anchorpcind-totsendfail%, %x6anchorpcind-
totrec%, %x6anchorpcind-totacc%, %x6anchorpcind-totrelay%, %x6anchorpcind-
totdenied%, %x6anchorpcind-totdiscard%, %x6anchorpcind-badform%, %x6anchorpcind-
decodeerr%, %x6anchorpcind-unspecerr%, %x6anchorpcind-missmandtlv%, %x6anchorpcind-
tlvvalinval%, %x6anchorpcind-unknownntlv%, %x6anchorpcind-
duptlvfound%, %x6anchorpcind-nosessfound%, %x6anchorpcind-
adminprohib%, %x6anchorpcind-noresourcedrop%, %x6anchorpcind-
transiderr%, %x6anchorpcack-totsent%, %x6anchorpcack-retranssent%, %x6anchorpcack-
totsendfail%, %x6anchorpcack-totrec%, %x6anchorpcack-totacc%, %x6anchorpcack-
totrelay%, %x6anchorpcack-totdenied%, %x6anchorpcack-totdiscard%, %x6anchorpcack-
badform%, %x6anchorpcack-decodeerr%, %x6anchorpcack-unspecerr%, %x6anchorpcack-
missmandtlv%, %x6anchorpcack-tlvvalinval%, %x6anchorpcack-
unknownntlv%, %x6anchorpcack-duptlvfound%, %x6anchorpcack-
nosessfound%, %x6anchorpcack-adminprohib%, %x6anchorpcack-
noresourcedrop%, %x6anchorpcack-transiderr%, %x6smexitstachareq-
totsent%, %x6smexitstachareq-retranssent%, %x6smexitstachareq-
totsendfail%, %x6smexitstachareq-totrec%, %x6smexitstachareq-
totacc%, %x6smexitstachareq-totrelay%, %x6smexitstachareq-
totdenied%, %x6smexitstachareq-totdiscard%, %x6smexitstachareq-
badform%, %x6smexitstachareq-decodeerr%, %x6smexitstachareq-

```

```

unspecerr%,%x6smexitstachareq-missmandtlv%,%x6smexitstachareq-
tlvvalinval%,%x6smexitstachareq-unknowntlv%,%x6smexitstachareq-
duptlvfound%,%x6smexitstachareq-nosessfound%,%x6smexitstachareq-adminprohib%

```

#### phsgw schema phsgwG format

```

EMS,PHSGWG,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%x6smexitstachare
q-noresourcedrop%,%x6smexitstachareq-transiderr%,%x6smexitstacharsp-
totsent%,%x6smexitstacharsp-retranssent%,%x6smexitstacharsp-
totsendfail%,%x6smexitstacharsp-totrec%,%x6smexitstacharsp-
totacc%,%x6smexitstacharsp-totrelay%,%x6smexitstacharsp-
totdenied%,%x6smexitstacharsp-totdiscard%,%x6smexitstacharsp-
badform%,%x6smexitstacharsp-decodeerr%,%x6smexitstacharsp-
unspecerr%,%x6smexitstacharsp-missmandtlv%,%x6smexitstacharsp-
tlvvalinval%,%x6smexitstacharsp-unknowntlv%,%x6smexitstacharsp-
duptlvfound%,%x6smexitstacharsp-nosessfound%,%x6smexitstacharsp-
adminprohib%,%x6smexitstacharsp-noresourcedrop%,%x6smexitstacharsp-
transiderr%,%x6inipagreq-totsent%,%x6inipagreq-retranssent%,%x6inipagreq-
totsendfail%,%x6inipagreq-totrec%,%x6inipagreq-totacc%,%x6inipagreq-
totrelay%,%x6inipagreq-totdenied%,%x6inipagreq-totdiscard%,%x6inipagreq-
badform%,%x6inipagreq-decodeerr%,%x6inipagreq-unspecerr%,%x6inipagreq-
missmandtlv%,%x6inipagreq-tlvvalinval%,%x6inipagreq-unknowntlv%,%x6inipagreq-
duptlvfound%,%x6inipagreq-nosessfound%,%x6inipagreq-adminprohib%,%x6inipagreq-
noresourcedrop%,%x6inipagreq-transiderr%,%x6inipagrsp-totsent%,%x6inipagrsp-
retranssent%,%x6inipagrsp-totsendfail%,%x6inipagrsp-totrec%,%x6inipagrsp-
totacc%,%x6inipagrsp-totrelay%,%x6inipagrsp-totdenied%,%x6inipagrsp-
totdiscard%,%x6inipagrsp-badform%,%x6inipagrsp-decodeerr%,%x6inipagrsp-
unspecerr%,%x6inipagrsp-missmandtlv%,%x6inipagrsp-tlvvalinval%,%x6inipagrsp-
unknowntlv%,%x6inipagrsp-duptlvfound%,%x6inipagrsp-nosessfound%,%x6inipagrsp-
adminprohib%,%x6inipagrsp-noresourcedrop%,%x6inipagrsp-
transiderr%,%x6delmsentreq-totsent%,%x6delmsentreq-retranssent%,%x6delmsentreq-
totsendfail%,%x6delmsentreq-totrec%,%x6delmsentreq-totacc%

```

#### phsgw schema phsgwH format

```

EMS,PHSGWH,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%x6delmsentreq-
totrelay%,%x6delmsentreq-totdenied%,%x6delmsentreq-totdiscard%,%x6delmsentreq-
badform%,%x6delmsentreq-decodeerr%,%x6delmsentreq-unspecerr%,%x6delmsentreq-
missmandtlv%,%x6delmsentreq-tlvvalinval%,%x6delmsentreq-
unknowntlv%,%x6delmsentreq-duptlvfound%,%x6delmsentreq-
nosessfound%,%x6delmsentreq-adminprohib%,%x6delmsentreq-
noresourcedrop%,%x6delmsentreq-transiderr%,%x6delmsentrsp-
totsent%,%x6delmsentrsp-retranssent%,%x6delmsentrsp-totsendfail%,%x6delmsentrsp-
totrec%,%x6delmsentrsp-totacc%,%x6delmsentrsp-totrelay%,%x6delmsentrsp-
totdenied%,%x6delmsentrsp-totdiscard%,%x6delmsentrsp-badform%,%x6delmsentrsp-
decodeerr%,%x6delmsentrsp-unspecerr%,%x6delmsentrsp-missmandtlv%,%x6delmsentrsp-
tlvvalinval%,%x6delmsentrsp-unknowntlv%,%x6delmsentrsp-
duptlvfound%,%x6delmsentrsp-nosessfound%,%x6delmsentrsp-
adminprohib%,%x6delmsentrsp-noresourcedrop%,%x6delmsentrsp-transiderr%,%x2horeq-
totsent%,%x2horeq-retranssent%,%x2horeq-totsendfail%,%x2horeq-totrec%,%x2horeq-
totacc%,%x2horeq-totrelay%,%x2horeq-totdenied%,%x2horeq-totdiscard%,%x2horeq-
badform%,%x2horeq-decodeerr%,%x2horeq-unspecerr%,%x2horeq-missmandtlv%,%x2horeq-
tlvvalinval%,%x2horeq-unknowntlv%,%x2horeq-duptlvfound%,%x2horeq-
nosessfound%,%x2horeq-adminprohib%,%x2horeq-noresourcedrop%,%x2horeq-

```

```
transiderr%,%x2horsp-totsent%,%x2horsp-retranssent%,%x2horsp-
totsendfail%,%x2horsp-totrec%,%x2horsp-totacc%,%x2horsp-totrelay%,%x2horsp-
totdenied%,%x2horsp-totdiscard%,%x2horsp-badform%,%x2horsp-decodeerr%,%x2horsp-
unspecerr%,%x2horsp-missmandtlv%,%x2horsp-tlvvalinval%,%x2horsp-
unknowntlv%,%x2horsp-duptlvfound%,%x2horsp-nosessfound%,%x2horsp-
adminprohib%,%x2horsp-noresourcedrop%,%x2horsp-transiderr%,%x2hoack-
totsent%,%x2hoack-retranssent%
```

#### phsgw schema phsgwI format

```
EMS,PHSGWI,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%x2hoack-
totsendfail%,%x2hoack-totrec%,%x2hoack-totacc%,%x2hoack-totrelay%,%x2hoack-
totdenied%,%x2hoack-totdiscard%,%x2hoack-badform%,%x2hoack-decodeerr%,%x2hoack-
unspecerr%,%x2hoack-missmandtlv%,%x2hoack-tlvvalinval%,%x2hoack-
unknowntlv%,%x2hoack-duptlvfound%,%x2hoack-nosessfound%,%x2hoack-
adminprohib%,%x2hoack-noresourcedrop%,%x2hoack-transiderr%,%x2unknown-
totrec%,%x2unknown-totacc%,%x2unknown-totrelay%,%x2unknown-
totdenied%,%x2unknown-totdiscard%,%x2unknown-badform%,%x2unknown-
decodeerr%,%x2unknown-unspecerr%,%x2unknown-missmandtlv%,%x2unknown-
tlvvalinval%,%x2unknown-unknowntlv%,%x2unknown-duptlvfound%,%x2unknown-
nosessfound%,%x2unknown-adminprohib%,%x2unknown-noresourcedrop%,%x2unknown-
transiderr%,%x2datagrerec-totpackrec%,%x2datagrerec-
protyperror%,%x2datagrerec-totbytrec%,%x2datagrerec-grekeyabs%,%x2datagrerec-
grechkerr%,%x2datagrerec-invpacklen%,%x2datagrerec-nosessfou%,%x2datagrerec-
unspecerr%,%x2datagresend-totpacksent%,%x2datagresend-senderr%,%x2datagresend-
totbytstent%,%x2datagresend-unspeerr%,%x2datagreeapolrec-
totpackrec%,%x2datagreeapolrec-protyperror%,%x2datagreeapolrec-
totbytrec%,%x2datagreeapolrec-start%,%x2datagreeapolrec-
packet%,%x2datagreeapolrec-invpacklen%,%x2datagreeapolrec-
nosessfou%,%x2datagreeapolrec-unspecerr%,%x2datagreeapolsend-
totpacksent%,%x2datagreeapolsend-senderr%,%x2datagreeapolsend-
totbytstent%,%x2datagreeapolsend-unspeerr%,%x1mspreattreq-
congestion%,%x1datapathgregreq-congestion%,%x1datapathpreregreq-
congestion%,%total-sessions-connected%,%ms-initiated-
reauth%,%x1datapathderegack-totsent%,%x1datapathderegack-
retranssent%,%x1datapathderegack-totsendfail%,%x1datapathderegack-totrec%
```

#### phsgw schema phsgwJ format

```
EMS,PHSGWJ,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%x1datapathderegack-
totacc%,%x1datapathderegack-totrelay%,%x1datapathderegack-
totdenied%,%x1datapathderegack-totdiscard%,%x1datapathderegack-
badform%,%x1datapathderegack-decodeerr%,%x1datapathderegack-
unspecerr%,%x1datapathderegack-missmandtlv%,%x1datapathderegack-
tlvvalinval%,%x1datapathderegack-unknowntlv%,%x1datapathderegack-
duptlvfound%,%x1datapathderegack-nosessfound%,%x1datapathderegack-
adminprohib%,%x1datapathderegack-noresourcedrop%,%x1datapathderegack-
transiderr%,%x2datapathderegack-totsent%,%x2datapathderegack-
retranssent%,%x2datapathderegack-totsendfail%,%x2datapathderegack-
totrec%,%x2datapathderegack-totacc%,%x2datapathderegack-
totrelay%,%x2datapathderegack-totdenied%,%x2datapathderegack-
totdiscard%,%x2datapathderegack-badform%,%x2datapathderegack-
decodeerr%,%x2datapathderegack-unspecerr%,%x2datapathderegack-
missmandtlv%,%x2datapathderegack-tlvvalinval%,%x2datapathderegack-
```

```

unknowntlv%,%x2datapathderegack-duptlvfound%,%x2datapathderegack-
nosessfound%,%x2datapathderegack-adminprohib%,%x2datapathderegack-
noresourcedrop%,%x2datapathderegack-transiderr%

```

```

egtpc schema egtpcSch1 format

```

```

EMS,EGTPC1,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%sess-cur%,%tun-
sent-cresess%,%tun-sent-retranscresess%,%tun-recv-cresess%,%tun-recv-
retranscresess%,%tun-sent-cresessresp%,%tun-sent-cresessrespaccept%,%tun-sent-
cresessrespdenied%,%tun-sent-retranscresessresp%,%tun-recv-cresessresp%,%tun-
recv-cresessrespaccept%,%tun-recv-cresessrespdenied%,%tun-sent-crebear%,%tun-
sent-retranscrebear%,%tun-recv-crebear%,%tun-recv-retranscrebear%,%tun-sent-
crebearresp%,%tun-sent-crebearrespaccept%,%tun-sent-crebearrespdenied%,%tun-
sent-retranscrebearresp%,%tun-recv-crebearresp%,%tun-recv-
crebearrespaccept%,%tun-recv-crebearrespdenied%,%tun-sent-bearrescmd%,%tun-recv-
bearrescmd%,%tun-sent-bearrescmd-fail%,%tun-recv-bearrescmd-fail%,%tun-sent-
modbearreq%,%tun-sent-retransmodbearreq%,%tun-recv-modbearreq%,%tun-recv-
retransmodbearreq%,%tun-sent-modbearresp%,%tun-sent-modbearrespaccept%,%tun-
sent-modbearrespdenied%,%tun-sent-retransmodbearresp%,%tun-recv-
modbearresp%,%tun-recv-modbearrespaccept%,%tun-recv-modbearrespdenied%,%tun-
sent-delsessreq%,%tun-sent-retransdelsessreq%,%tun-recv-delsessreq%,%tun-recv-
retransdelsessreq%,%tun-sent-delsessresp%,%tun-sent-delsessrespaccept%,%tun-
sent-delsessrespdenied%,%tun-recv-delsessresp%,%tun-recv-
delsessrespaccept%,%tun-recv-delsessrespdenied%,%tun-sent-delbearreq%,%tun-sent-
retransdelbearreq%,%tun-recv-delbearreq%,%tun-recv-retransdelbearreq%,%tun-sent-
delbearresp%,%tun-sent-delbearrespaccept%,%tun-sent-delbearrespdenied%,%tun-
recv-delbearresp%,%tun-recv-delbearrespaccept%,%tun-recv-
delbearrespdenied%,%tun-sent-dlinknotif%,%tun-sent-retransdlinknotif%,%tun-recv-
dlinknotif%,%tun-recv-retransdlinknotif%,%tun-recv-dlinknotifack%,%tun-recv-
dlinknotifackaccept%

```

```

egtpc schema egtpcSch2 format

```

```

EMS,EGTPC2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%tun-recv-
dlinknotifackdenied%,%tun-sent-dlinkdatafail%,%tun-recv-dlinkdatafail%,%tun-
sent-relaccbearreq%,%tun-sent-retransrelaccbearreq%,%tun-recv-
relaccbearreq%,%tun-recv-retransrelaccbearreq%,%tun-sent-relaccbearresp%,%tun-
sent-relaccbearrespaccept%,%tun-sent-relaccbearrespdenied%,%tun-sent-
retransrelaccbearresp%,%tun-recv-relaccbearresp%,%tun-recv-
relaccbearrespaccept%,%tun-recv-relaccbearrespdenied%,%tun-recv-
upduplanereq%,%tun-recv-retransupduplanereq%,%tun-sent-upduplaneresp%,%tun-sent-
upduplanerespaccept%,%tun-sent-upduplanerespdenied%,%tun-sent-modbearcmd%,%tun-
recv-modbearcmd%,%tun-sent-modbearfail%,%tun-recv-modbearfail%,%tun-sent-
updbearreq%,%tun-sent-retransupdbearreq%,%tun-recv-updbearreq%,%tun-recv-
retransupdbearreq%,%tun-sent-updbearresp%,%tun-sent-updbearrespaccept%,%tun-
sent-updbearrespdenied%,%tun-recv-updbearresp%,%tun-recv-
updbearrespaccept%,%tun-recv-updbearrespdenied%,%tun-sent-deactbear%,%tun-recv-
deactbear%,%tun-sent-deactbearfail%,%tun-recv-deactbearfail%,%path-sent-
echoreq%,%path-sent-retransechoreq%,%path-recv-echoreq%,%path-sent-
echoresp%,%path-recv-echoresp%,%path-sent-versnotsupp%,%path-recv-
versnotsupp%,%gtpv1tun-sent-gpdu%,%gtpv1tun-recv-gpdu%,%gtpv1tun-
txoctet%,%gtpv1tun-rxoctet%,%gtpv1tun-sent-gtpuerror%,%gtpv1tun-recv-
gtpuerror%,%gtpv1tun-sent-endmarker%,%gtpv1path-sent-echoreq%,%gtpv1path-recv-

```

```
echoreq%, %gtpv1path-sent-echoresp%, %gtpv1path-recv-echoresp%, %gtpv1path-sent-
hdrnotif%, %gtpv1path-recv-hdrnotif%
```

```
egtpc schema egtpcSch3 format
```

```
EMS, EGTPC3, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %tun-sent-
retransbearrescmd%, %tun-recv-retransbearrescmd%, %tun-sent-retransbearrescmd-
fail%, %tun-recv-retransbearrescmd-fail%, %tun-sent-retransmodbearcmd%, %tun-recv-
retransmodbearcmd%, %tun-sent-retransmodbearfail%, %tun-recv-
retransmodbearfail%, %tun-sent-delbearcmd%, %tun-sent-retransdelbearcmd%, %tun-
recv-delbearcmd%, %tun-recv-retransdelbearcmd%, %tun-sent-delbearfail%, %tun-sent-
retransdelbearfail%, %tun-recv-delbearfail%, %tun-recv-retransdelbearfail%
```

```
imsa schema imsaSch1 format
```

```
EMS, IMSA, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %sess-cur%, %dpca-
cursess%, %dpca-imsaadd%, %dpca-start%, %dpca-seccreate%, %dpca-secterm%, %dpca-
sessupd%, %dpca-term%, %dpca-sessfail%, %dpca-msg-recv%, %dpca-msg-sent%, %dpca-msg-
ccr%, %dpca-msg-cca%, %dpca-msg-ccrinit%, %dpca-msg-ccainit%, %dpca-msg-
ccainitacc%, %dpca-msg-ccainitrej%, %dpca-msg-ccainittmo%, %dpca-msg-ccrupd%, %dpca-
msg-ccaupd%, %dpca-msg-ccaupdtmo%, %dpca-msg-ccrfin%, %dpca-msg-ccafin%, %dpca-msg-
ccafintmo%, %dpca-msg-asr%, %dpca-msg-asa%, %dpca-msg-rar%, %dpca-msg-raa%, %dpca-
msgerr-proto%, %dpca-msgerr-badans%, %dpca-msgerr-unksessreq%, %dpca-msgerr-
unkcomm%, %dpca-msgerr-unsupcomm%, %dpca-msgerr-unkfailhand%, %dpca-term-
diamlogout%, %dpca-term-servnotprov%, %dpca-term-badans%, %dpca-term-admin%, %dpca-
term-linkbroken%, %dpca-term-authexp%, %dpca-term-usermoved%, %dpca-term-
sesstmo%, %dpca-term-authrej%, %dpca-term-other%, %dpca-expres-errinitparam%, %dpca-
expres-errtrigevt%, %dpca-expres-bearnotauth%, %dpca-expres-trafmaprej%, %dpca-
expres-pccruleevt%, %dpca-expres-conflictingreq%, %dpca-expres-bearerevt%, %dpca-
expres-badrescode%, %dpca-peer-switch%, %dpca-peer-switch-done%, %dpca-ccai-
timeout%, %dpca-ccri-send-error%, %dpca-ccai-unh-unk-rcode%, %dpca-ccai-err-
rcode%, %dpca-ccau-timeout%, %dpca-ccru-send-error%, %dpca-ccau-unh-unk-
rcode%, %dpca-ccau-err-rcode%, %dpca-ccat-timeout%, %dpca-ccrt-send-error%, %dpca-
ccat-unh-unk-rcode%, %dpca-ccat-err-rcode%, %dpca-ccfh-continue%, %dpca-ccfh-retry-
and-term%, %dpca-ccfh-terminate%, %dpca-unknown-reason%, %dpca-ue-subscription-
chngd%, %dpca-insuffcnt-srvr-resrce%
```

```
lma schema lmaSch1 format
```

```
EMS, LMA1, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %sess-
cur%, %mipaaaaauth-attempts%, %mipaaaaauth-success%, %mipaaaaauth-
totalfailures%, %mipaaaaauth-actualauthfailures%, %mipaaaaauth-
miscauthfailures%, %bindupd%, %bindupd-accept%, %bindupd-denied%, %bindupd-
discard%, %bindupd-initial%, %bindupd-initialaccept%, %bindupd-
initialdenied%, %bindupd-refresh%, %bindupd-refreshaccept%, %bindupd-
refreshdenied%, %bindupd-dereg%, %bindupd-deregaccept%, %bindupd-
deregdenied%, %bindupd-handoff%, %bindupd-handoffaccept%, %bindupd-
handoffdenied%, %bindupd-ack%, %bindupd-ackacceptreg%, %bindupd-
ackacceptdereg%, %bindupd-ackdenied%, %bindupd-acksenderror%, %bindupd-
denynoresource%, %bindupd-denymisid%, %bindupd-denymnauthfailure%, %bindupd-
denyadmin%, %bindupd-denymsgidreq%, %bindupd-denydadfailed%, %bindupd-
denynothomesub%, %bindupd-denyseqoow%, %bindupd-denytypchgdis%, %bindupd-
denyunspec%, %bindupd-denyserveauthfailed%, %bindupd-denyproxyreg%, %bindupd-
denytimestamp%, %bindupd-denytimestamplower%, %bindupd-denymismnid%, %bindupd-
denymishnp%, %bindupd-denymisaccesstech%, %bindupd-denymishandoffind%, %bindupd-
denynotauthhnp%, %bindupd-denynotlmamobile%, %bindupd-
```

```

denynotauthproxyreg%,%bindupd-denybceprefix%,%bindupd-
denynoresourcesessmgr%,%bindupd-denynoresourcememory%,%bindupd-
denynoresourcesreject%,%bindupd-denynoresourceinputq%,%bindupd-
denynoresourcesimulbind%,%bindupd-denynoresourceaddallocfail%,%bindupd-
denyadminprohmnaaaaauth%,%bindupd-denyadminprohhbit%,%bindupd-
denyadminprohmnaaaaspi%,%bindupd-denyadminprohmhaspi%,%bindupd-
denyadmincong%,%bindupd-denyadminpolrej%,%bindupd-denyadminhoa%,%bindupd-
denyadminperm%,%bindupd-denyadminbadreq%,%bindupd-discardcong%,%bindupd-
discardchecksum%,%bindupd-discardauthpending%,%bindupd-discardsessnotfound%

```

#### lma schema lmaSch2 format

```

EMS,LMA2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%bindupd-
discardhamgrnotready%,%bindupd-discarddecodefail%,%bindupd-
discardinbuflen%,%bindrev-sent%,%bindrev-retriessent%,%bindrev-
ackrcvd%,%bindrev-notacked%,%bindrev-rcvd%,%bindrev-acksent%,%bindrev%,%bindrev-
discardsessnotfound%,%bindrev-discardbadreq%,%bindrev-
discarddecodeerror%,%bindrev-discardchecksumerror%,%bindrev-
discardinvalidmsgtype%,%bindrev-discardhamgrnotready%,%bindrev-
discardmatchreqnotfound%,%bindrev-discardinvalidbuflen%,%rxpackets%,%rxpackets-
6in6%,%rxpackets-4in6%,%rxpackets-ipv6greipv4%,%rxpackets-
ipv6greipv6%,%rxoctets%,%rxoctets-6in6%,%rxoctets-4in6%,%rxoctets-
ipv6greipv4%,%rxoctets-ipv6greipv6%,%dataerror%,%dataerror-proto%,%dataerror-
invpktlen%,%dataerror-nosess%,%txpackets%,%txpackets-6in6%,%txpackets-
4in6%,%txpackets-ipv6greipv4%,%txpackets-ipv6greipv6%,%txoctets%,%txoctets-
6in6%,%txoctets-4in6%,%txoctets-ipv6greipv4%,%txoctets-ipv6greipv6%,%icmpv6-
pkttoobigrecv%,%icmpv6-pkttoobigdrop%,%icmpv6-
pkttoobigrelay%,%disc%,%disclifetime%,%discdereg%,%discadmin%,%discother%

```

#### mag schema magSch1 format

```

EMS,MAG,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%sess-
cur%,%bindupd%,%bindupd-init%,%bindupd-initretrans%,%bindupd-renew%,%bindupd-
renewretrans%,%bindupd-dereg%,%bindupd-deregretrans%,%bindack%,%bindack-
error%,%bindack-accept%,%bindack-denied%,%bindack-init%,%bindack-
renew%,%bindack-dereg%,%deniedlma-noresource%,%deniedlma-mismatchid%,%deniedlma-
mnauthfail%,%deniedlma-adminproh%,%deniedlma-msgidrqd%,%deniedlma-
dadfailed%,%deniedlma-homesubnet%,%deniedlma-seqoow%,%deniedlma-
typchgdis%,%deniedlma-unspec%,%deniedlma-servauthfailed%,%deniedlma-
proxyreg%,%deniedlma-timestamp%,%deniedlma-timestamplower%,%deniedlma-
mismnid%,%deniedlma-mishnp%,%deniedlma-misaccessstech%,%deniedlma-
mishandoffind%,%deniedlma-notauthhnp%,%deniedlma-notlmamobile%,%deniedlma-
notauthproxyreg%,%deniedlma-bceprefix%,%bindack-errormishnp%,%bindack-
errornai%,%bindack-errorhomeaddconf%,%bindack-errormatchreq%,%bindack-
errorbadlyformed%,%bindack-errorchecksum%,%bindack-errorsessnotfound%,%bindrev-
sent%,%bindrev-retriessent%,%bindrev-ackrcvd%,%bindrev-notacked%,%bindrev-
rcvd%,%bindrev-acksent%,%bindrev-discardtotal%,%bindrev-
discardsessnotfound%,%bindrev-discardbadreq%,%bindrev-discarddecode%,%bindrev-
discardchecksum%,%bindrev-discardmsgtype%,%bindrev-
discardnomemory%,%rxpackets%,%rxpackets-6in6%,%rxpackets-4in6%,%rxpackets-
ipv6greipv4%,%rxpackets-ipv6greipv6%,%rxoctets%,%rxoctets-6in6%,%rxoctets-
4in6%,%rxoctets-ipv6greipv4%,%rxoctets-ipv6greipv6%,%dataerror%,%dataerror-
proto%,%dataerror-invpktlen%,%dataerror-nosess%,%txpackets%,%txpackets-
6in6%,%txpackets-4in6%,%txpackets-ipv6greipv4%,%txpackets-

```

```

ipv6greipv6%,%txoctets%,%txoctets-6in6%,%txoctets-4in6%,%txoctets-
ipv6greipv4%,%txoctets-
ipv6greipv6%,%disc%,%disclifetime%,%discaccessinit%,%discadmin%,%discother%,%dis
clmarevoc%

```

#### sgw schema sgwSch1 format

```

EMS,SGW1,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%sess-
cur%,%sessstat-totcur-ueidle%,%sessstat-totcur-ueactive%,%sessstat-totcur-
pdn%,%sessstat-totcur-bearers%,%sessstat-totsetup-ue%,%sessstat-totsetup-
pdn%,%sessstat-totsetup-bearers%,%sessstat-pdnsetuptype-ipv4%,%sessstat-
pdnsetuptype-ipv6%,%sessstat-pdnsetuptype-ipv4v6%,%sessstat-pdnsetupintrface-
s11%,%sessstat-pdnsetupintrface-s4%,%sessstat-pdnsetups5proto-gtp%,%sessstat-
pdnsetups5proto-pmip%,%sessstat-pdnrel-ipv4%,%sessstat-pdnrel-ipv6%,%sessstat-
pdnrel-ipv4v6%,%sessstat-pdnrelrsn-mme%,%sessstat-pdnrelrsn-pgw%,%sessstat-
pdnrelrsn-pcrf%,%sessstat-pdnrelrsn-local%,%sessstat-pdnrelrsn-slerr%,%sessstat-
pdnrelrsn-s5err%,%sessstat-pdnrelrsn-pathfail-S11%,%sessstat-pdnrelrsn-pathfail-
S5%,%sessstat-pdnrelrsn-pathfail-S5-u%,%sessstat-pdnrelrsn-pathfail-S1-
u%,%sessstat-pdnrelrsn-other%,%sessstat-pdnrej-ipv4%,%sessstat-pdnrej-
ipv6%,%sessstat-pdnrej-ipv4v6%,%sessstat-pdnrejsrn-pgw%,%sessstat-pdnrejsrn-
license%,%sessstat-pdnrejsrn-newcall-policy%,%sessstat-pdnrejsrn-
overload%,%sessstat-pdnrejsrn-cong%,%sessstat-pdnrejsrn-other%,%toteptsbearsetup-
qci1%,%toteptsbearsetup-qci2%,%toteptsbearsetup-qci3%,%toteptsbearsetup-
qci4%,%toteptsbearsetup-qci5%,%toteptsbearsetup-qci6%,%toteptsbearsetup-
qci7%,%toteptsbearsetup-qci8%,%toteptsbearsetup-qci9%,%toteptsbearsetup-
other%,%toteptsbearmod%,%toteptsbearrel-qci1%,%toteptsbearrel-qci2%,%toteptsbearrel-
qci3%,%toteptsbearrel-qci4%,%toteptsbearrel-qci5%,%toteptsbearrel-
qci6%,%toteptsbearrel-qci7%,%toteptsbearrel-qci8%,%toteptsbearrel-
qci9%,%toteptsbearrel-other%,%toteptsbearmod-qci1%,%toteptsbearmod-
qci2%,%toteptsbearmod-qci3%,%toteptsbearmod-qci4%,%toteptsbearmod-
qci5%,%toteptsbearmod-qci6%,%toteptsbearmod-qci7%,%toteptsbearmod-qci8%

```

#### sgw schema sgwSch2 format

```

EMS,SGW2,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%toteptsbearmod-
qci9%,%toteptsbearmod-other%,%toteptsbearrel-dedrsn-pgw%,%toteptsbearrel-dedrsn-
pcrf%,%toteptsbearrel-dedrsn-slerr%,%toteptsbearrel-dedrsn-s5err%,%toteptsbearrel-
dedrsn-local%,%toteptsbearrel-dedrsn-pdn%,%toteptsbearrel-dedrsn-pathfail-s1-
u%,%toteptsbearrel-dedrsn-pathfail-s5-u%,%toteptsbearrel-dedrsn-other%,%datastat-
uplink-qci1totbyte%,%datastat-uplink-qci1totpkt%,%datastat-uplink-
qci2totbyte%,%datastat-uplink-qci2totpkt%,%datastat-uplink-
qci3totbyte%,%datastat-uplink-qci3totpkt%,%datastat-uplink-
qci4totbyte%,%datastat-uplink-qci4totpkt%,%datastat-uplink-
qci5totbyte%,%datastat-uplink-qci5totpkt%,%datastat-uplink-
qci6totbyte%,%datastat-uplink-qci6totpkt%,%datastat-uplink-
qci7totbyte%,%datastat-uplink-qci7totpkt%,%datastat-uplink-
qci8totbyte%,%datastat-uplink-qci8totpkt%,%datastat-uplink-
qci9totbyte%,%datastat-uplink-qci9totpkt%,%datastat-uplink-
othertotbyte%,%datastat-uplink-othertotpkt%,%datastat-uplink-dropstat-
qci1totbyte%,%datastat-uplink-dropstat-qci1totpkt%,%datastat-uplink-dropstat-
qci2totbyte%,%datastat-uplink-dropstat-qci2totpkt%,%datastat-uplink-dropstat-
qci3totbyte%,%datastat-uplink-dropstat-qci3totpkt%,%datastat-uplink-dropstat-
qci4totbyte%,%datastat-uplink-dropstat-qci4totpkt%,%datastat-uplink-dropstat-
qci5totbyte%,%datastat-uplink-dropstat-qci5totpkt%,%datastat-uplink-dropstat-

```

```
qci6totbyte%,%datastat-uplink-dropstat-qci6totpkt%,%datastat-uplink-dropstat-
qci7totbyte%,%datastat-uplink-dropstat-qci7totpkt%,%datastat-uplink-dropstat-
qci8totbyte%,%datastat-uplink-dropstat-qci8totpkt%,%datastat-uplink-dropstat-
qci9totbyte%,%datastat-uplink-dropstat-qci9totpkt%,%datastat-uplink-dropstat-
othertotbyte%,%datastat-uplink-dropstat-othertotpkt%
```

#### sgw schema sgwSch3 format

```
EMS,SGW3,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%datastat-downlink-
qci1totbyte%,%datastat-downlink-qci1totpkt%,%datastat-downlink-
qci2totbyte%,%datastat-downlink-qci2totpkt%,%datastat-downlink-
qci3totbyte%,%datastat-downlink-qci3totpkt%,%datastat-downlink-
qci4totbyte%,%datastat-downlink-qci4totpkt%,%datastat-downlink-
qci5totbyte%,%datastat-downlink-qci5totpkt%,%datastat-downlink-
qci6totbyte%,%datastat-downlink-qci6totpkt%,%datastat-downlink-
qci7totbyte%,%datastat-downlink-qci7totpkt%,%datastat-downlink-
qci8totbyte%,%datastat-downlink-qci8totpkt%,%datastat-downlink-
qci9totbyte%,%datastat-downlink-qci9totpkt%,%datastat-downlink-
othertotbyte%,%datastat-downlink-othertotpkt%,%datastat-downlink-dropstat-
qci1totbyte%,%datastat-downlink-dropstat-qci1totpkt%,%datastat-downlink-
dropstat-qci2totbyte%,%datastat-downlink-dropstat-qci2totpkt%,%datastat-
downlink-dropstat-qci3totbyte%,%datastat-downlink-dropstat-
qci3totpkt%,%datastat-downlink-dropstat-qci4totbyte%,%datastat-downlink-
dropstat-qci4totpkt%,%datastat-downlink-dropstat-qci5totbyte%,%datastat-
downlink-dropstat-qci5totpkt%,%datastat-downlink-dropstat-
qci6totbyte%,%datastat-downlink-dropstat-qci6totpkt%,%datastat-downlink-
dropstat-qci7totbyte%,%datastat-downlink-dropstat-qci7totpkt%,%datastat-
downlink-dropstat-qci8totbyte%,%datastat-downlink-dropstat-
qci8totpkt%,%datastat-downlink-dropstat-qci9totbyte%,%datastat-downlink-
dropstat-qci9totpkt%,%datastat-downlink-dropstat-othertotbyte%,%datastat-
downlink-dropstat-othertotpkt%,%intersgwhaovstat-pdnin-x2%,%intersgwhaovstat-
pdnin-idletau%,%intersgwhaovstat-pdnin-s1%,%intersgwhaovstat-
pdnout%,%intersgwhaovstat-intra-intramme%,%intersgwhaovstat-intra-intermme%
```

#### sgw schema sgwSch4 format

```
EMS,SGW4,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%pagingstat-
req%,%pagingstat-rej%,%pagingstat-fail%,%pagingstat-actidleuetrans%,%pagingstat-
idleactuetrans%,%pagingreldatastat-totbytebuff%,%pagingreldatastat-disc%,%misc-
updatebeforembreq%,%misc-chbregrcvbeforecsrsp%
```

#### pgw schema pgwSch1 format

```
EMS,PGW1,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%sess-
cur%,%sessstat-bearact-def%,%sessstat-bearact-ded%,%sessstat-bearact-ue-init-
ded%,%sessstat-bearact-nw-init-ded%,%sessstat-bearsetup-def%,%sessstat-
bearsetup-ded%,%sessstat-bearsetup-ue-init-ded%,%sessstat-bearsetup-nw-init-
ded%,%sessstat-bearrel-def%,%sessstat-bearrel-ded%,%sessstat-bearrel-
nwdefadmin%,%sessstat-bearrel-nwdefgtp%,%sessstat-bearrel-nwdefsgw%,%sessstat-
bearrel-nwdefmme%,%sessstat-bearrel-nwdedadmin%,%sessstat-bearrel-
nwdedgtp%,%sessstat-bearrel-nwdedmme%,%sessstat-bearrel-nwdeddefbear%,%sessstat-
bearrel-nwdedgxdisc%,%sessstat-bearrelfail-def%,%sessstat-bearrelfail-
ded%,%sessstat-bearrej-def%,%sessstat-bearrej-ded%,%sessstat-bearrej-
nores%,%sessstat-bearrej-uereq%,%sessstat-bearrej-uereq-nores%,%sessstat-
bearrej-misapn%,%sessstat-bearrej-nwreq%,%sessstat-bearrej-nwreq-
nores%,%sessstat-bearrej-nwreq-nomem%,%sessstat-bearrej-nwreq-
```

```
sysfail%,%sessstat-bearrej-apnmode%,%sessstat-bearrej-pdn%,%sessstat-bearrej-
apnrestr%,%sessstat-bearrej-subsauth%,%sessstat-bearrej-
subsaddrnotallow%,%sessstat-bearrej-subsaddrnotalloc%,%sessstat-bearrej-
dynaddrnotalloc%,%sessstat-bearrej-subsaddrnotpres%,%sessstat-bearmod-
ueinit%,%sessstat-bearmod-nwinit%,%sessstat-bearmod-ueqos%,%sessstat-bearmod-
uetft%,%sessstat-bearmod-nwqos%,%sessstat-bearmod-nwtft%,%sessstat-bearmodfail-
ueinit%
```

#### pgw schema pgwSch2 format

```
EMS, PGW2, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %sessstat-
bearmodfail-nwinit%, %sessstat-bearmodfail-uenores%, %sessstat-bearmodfail-
uesemtft%, %sessstat-bearmodfail-uesyntft%, %sessstat-bearmodfail-
uesempkt%, %sessstat-bearmodfail-uesynpkt%, %sessstat-bearmodfail-
nwnores%, %sessstat-bearmodfail-nwnomem%, %sessstat-bearmodfail-
nwsysfail%, %sessstat-bearmodfail-nwsemtft%, %sessstat-bearmodfail-
nwsyntft%, %sessstat-bearmodfail-nwsempkt%, %sessstat-bearmodfail-
nwsynpkt%, %sessstat-pdn-ipv4active%, %sessstat-pdn-ipv4setup%, %sessstat-pdn-
ipv4rel%, %sessstat-pdn-ipv6active%, %sessstat-pdn-ipv6setup%, %sessstat-pdn-
ipv6rel%, %sessstat-pdn-ipv4v6active%, %sessstat-pdn-ipv4v6setup%, %sessstat-pdn-
ipv4v6rel%, %sessstat-ipv4addalloc%, %sessstat-ipaddalloc-ipv4loacalpool%, %sessstat-
ipaddalloc-ipv4staticaddr%, %sessstat-ipaddalloc-ipv4radaddr%, %sessstat-
ipv6addalloc%, %sessstat-ipaddalloc-ipv6auto%, %subplmnstat-
homesubact%, %subplmnstat-homesubsetup%, %subplmnstat-homesubrel%, %subplmnstat-
roamsubact%, %subplmnstat-roamsubsetup%, %subplmnstat-roamsubrel%, %subplmnstat-
visitsubact%, %subplmnstat-visitsubsetup%, %subplmnstat-visitsubrel%, %sgitunstat-
ipv4sessact%, %sgitunstat-ipv4sesssetup%, %sgitunstat-ipv4sessrel%, %sgitunstat-
ipv4gresessact%, %sgitunstat-ipv4gresesssetup%, %sgitunstat-
ipv4gresessrel%, %sgitunstat-ipv6sessact%, %sgitunstat-ipv6sesssetup%, %sgitunstat-
ipv6sessrel%
```

#### pgw schema pgwSch3 format

```
EMS, PGW3, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %subqosstat-
bearact-qci1%, %subqosstat-bearact-qci2%, %subqosstat-bearact-qci3%, %subqosstat-
bearact-qci4%, %subqosstat-bearact-qci5%, %subqosstat-bearact-qci6%, %subqosstat-
bearact-qci7%, %subqosstat-bearact-qci8%, %subqosstat-bearact-qci9%, %subqosstat-
bearact-qcinongbr%, %subqosstat-bearact-qcigbr%, %subqosstat-bearsetup-
qci1%, %subqosstat-bearsetup-qci2%, %subqosstat-bearsetup-qci3%, %subqosstat-
bearsetup-qci4%, %subqosstat-bearsetup-qci5%, %subqosstat-bearsetup-
qci6%, %subqosstat-bearsetup-qci7%, %subqosstat-bearsetup-qci8%, %subqosstat-
bearsetup-qci9%, %subqosstat-bearsetup-qcinongbr%, %subqosstat-bearsetup-
qcigbr%, %subqosstat-bearrel-qci1%, %subqosstat-bearrel-qci2%, %subqosstat-bearrel-
qci3%, %subqosstat-bearrel-qci4%, %subqosstat-bearrel-qci5%, %subqosstat-bearrel-
qci6%, %subqosstat-bearrel-qci7%, %subqosstat-bearrel-qci8%, %subqosstat-bearrel-
qci9%, %subqosstat-bearrel-qcinongbr%, %subqosstat-bearrel-qcigbr%, %subdatastat-
totuppktfwd%, %subdatastat-uppktfwd-qci1%, %subdatastat-uppktfwd-
qci2%, %subdatastat-uppktfwd-qci3%, %subdatastat-uppktfwd-qci4%, %subdatastat-
uppktfwd-qci5%, %subdatastat-uppktfwd-qci6%, %subdatastat-uppktfwd-
qci7%, %subdatastat-uppktfwd-qci8%, %subdatastat-uppktfwd-qci9%, %subdatastat-
uppktfwd-stdqcinongbr%, %subdatastat-uppktfwd-stdqcigbr%, %subdatastat-uppktfwd-
qcinongbr%
```

#### pgw schema pgwSch4 format

```
EMS, PGW4, %date%, %time%, %vpnname%, %vpnid%, %servname%, %servid%, %subdatastat-
```

```

uppktfwd-qcigbr%,%subdatastat-uppktfwd-totgbr%,%subdatastat-uppktfwd-
totnongbr%,%subdatastat-totupbytefwd%,%subdatastat-upbytefwd-qci1%,%subdatastat-
upbytefwd-qci2%,%subdatastat-upbytefwd-qci3%,%subdatastat-upbytefwd-
qci4%,%subdatastat-upbytefwd-qci5%,%subdatastat-upbytefwd-qci6%,%subdatastat-
upbytefwd-qci7%,%subdatastat-upbytefwd-qci8%,%subdatastat-upbytefwd-
qci9%,%subdatastat-upbytefwd-stdqcinongbr%,%subdatastat-upbytefwd-
stdqcigbr%,%subdatastat-upbytefwd-qcinongbr%,%subdatastat-upbytefwd-
qcigbr%,%subdatastat-upbytefwd-totgbr%,%subdatastat-upbytefwd-
totnongbr%,%subdatastat-totdownpktfwd%,%subdatastat-downpktfwd-
qci1%,%subdatastat-downpktfwd-qci2%,%subdatastat-downpktfwd-qci3%,%subdatastat-
downpktfwd-qci4%,%subdatastat-downpktfwd-qci5%,%subdatastat-downpktfwd-
qci6%,%subdatastat-downpktfwd-qci7%,%subdatastat-downpktfwd-qci8%,%subdatastat-
downpktfwd-qci9%,%subdatastat-downpktfwd-stdqcinongbr%,%subdatastat-downpktfwd-
stdqcigbr%,%subdatastat-downpktfwd-qcinongbr%,%subdatastat-downpktfwd-
qcigbr%,%subdatastat-downpktfwd-totgbr%,%subdatastat-downpktfwd-
totnongbr%,%subdatastat-totdownbytefwd%,%subdatastat-downbytefwd-
qci1%,%subdatastat-downbytefwd-qci2%,%subdatastat-downbytefwd-
qci3%,%subdatastat-downbytefwd-qci4%,%subdatastat-downbytefwd-qci5%

```

pgw schema pgwSch5 format

```

EMS,PGW5,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%subdatastat-
downbytefwd-qci6%,%subdatastat-downbytefwd-qci7%,%subdatastat-downbytefwd-
qci8%,%subdatastat-downbytefwd-qci9%,%subdatastat-downbytefwd-
stdqcinongbr%,%subdatastat-downbytefwd-stdqcigbr%,%subdatastat-downbytefwd-
qcinongbr%,%subdatastat-downbytefwd-qcigbr%,%subdatastat-downbytefwd-
totgbr%,%subdatastat-downbytefwd-totnongbr%,%subdatastat-
totuppktdrop%,%subdatastat-uppktdrop-qci1%,%subdatastat-uppktdrop-
qci2%,%subdatastat-uppktdrop-qci3%,%subdatastat-uppktdrop-qci4%,%subdatastat-
uppktdrop-qci5%,%subdatastat-uppktdrop-qci6%,%subdatastat-uppktdrop-
qci7%,%subdatastat-uppktdrop-qci8%,%subdatastat-uppktdrop-qci9%,%subdatastat-
uppktdrop-stdqcinongbr%,%subdatastat-uppktdrop-stdqcigbr%,%subdatastat-
uppktdrop-qcinongbr%,%subdatastat-uppktdrop-qcigbr%,%subdatastat-uppktdrop-
totgbr%,%subdatastat-uppktdrop-totnongbr%,%subdatastat-
totupbytedrop%,%subdatastat-upbytedrop-qci1%,%subdatastat-upbytedrop-
qci2%,%subdatastat-upbytedrop-qci3%,%subdatastat-upbytedrop-qci4%,%subdatastat-
upbytedrop-qci5%,%subdatastat-upbytedrop-qci6%,%subdatastat-upbytedrop-
qci7%,%subdatastat-upbytedrop-qci8%,%subdatastat-upbytedrop-qci9%,%subdatastat-
upbytedrop-stdqcinongbr%,%subdatastat-upbytedrop-stdqcigbr%,%subdatastat-
upbytedrop-qcinongbr%,%subdatastat-upbytedrop-qcigbr%

```

pgw schema pgwSch6 format

```

EMS,PGW6,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%subdatastat-
upbytedrop-totgbr%,%subdatastat-upbytedrop-totnongbr%,%subdatastat-
totdownpktdrop%,%subdatastat-downpktdrop-qci1%,%subdatastat-downpktdrop-
qci2%,%subdatastat-downpktdrop-qci3%,%subdatastat-downpktdrop-
qci4%,%subdatastat-downpktdrop-qci5%,%subdatastat-downpktdrop-
qci6%,%subdatastat-downpktdrop-qci7%,%subdatastat-downpktdrop-
qci8%,%subdatastat-downpktdrop-qci9%,%subdatastat-downpktdrop-
stdqcinongbr%,%subdatastat-downpktdrop-stdqcigbr%,%subdatastat-downpktdrop-
qcinongbr%,%subdatastat-downpktdrop-qcigbr%,%subdatastat-downpktdrop-
totgbr%,%subdatastat-downpktdrop-totnongbr%,%subdatastat-
totdownbytedrop%,%subdatastat-downbytedrop-qci1%,%subdatastat-downbytedrop-

```

```
qci2%,%subdatastat-downbytedrop-qci3%,%subdatastat-downbytedrop-
qci4%,%subdatastat-downbytedrop-qci5%,%subdatastat-downbytedrop-
qci6%,%subdatastat-downbytedrop-qci7%,%subdatastat-downbytedrop-
qci8%,%subdatastat-downbytedrop-qci9%,%subdatastat-downbytedrop-
stdqcinongbr%,%subdatastat-downbytedrop-stdqcigbr%,%subdatastat-downbytedrop-
qcinongbr%,%subdatastat-downbytedrop-qcigbr%,%subdatastat-downbytedrop-
totgbr%,%subdatastat-downbytedrop-totnongbr%,%subdatastat-
totuppktdropmbrexc%,%subdatastat-uppktdropmbrexc-qci1%,%subdatastat-
uppktdropmbrexc-qci2%,%subdatastat-uppktdropmbrexc-qci3%
```

#### pgw schema pgwSch7 format

```
EMS,PGW7,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%subdatastat-
uppktdropmbrexc-qci4%,%subdatastat-uppktdropmbrexc-qci5%,%subdatastat-
uppktdropmbrexc-qci6%,%subdatastat-uppktdropmbrexc-qci7%,%subdatastat-
uppktdropmbrexc-qci8%,%subdatastat-uppktdropmbrexc-qci9%,%subdatastat-
uppktdropmbrexc-stdqcinongbr%,%subdatastat-uppktdropmbrexc-
stdqcigbr%,%subdatastat-uppktdropmbrexc-qcinongbr%,%subdatastat-uppktdropmbrexc-
qcigbr%,%subdatastat-uppktdropmbrexc-totgbr%,%subdatastat-uppktdropmbrexc-
totnongbr%,%subdatastat-totupbytedropmbrexc%,%subdatastat-upbytedropmbrexc-
qci1%,%subdatastat-upbytedropmbrexc-qci2%,%subdatastat-upbytedropmbrexc-
qci3%,%subdatastat-upbytedropmbrexc-qci4%,%subdatastat-upbytedropmbrexc-
qci5%,%subdatastat-upbytedropmbrexc-qci6%,%subdatastat-upbytedropmbrexc-
qci7%,%subdatastat-upbytedropmbrexc-qci8%,%subdatastat-upbytedropmbrexc-
qci9%,%subdatastat-upbytedropmbrexc-stdqcinongbr%,%subdatastat-upbytedropmbrexc-
stdqcigbr%,%subdatastat-upbytedropmbrexc-qcinongbr%,%subdatastat-
upbytedropmbrexc-qcigbr%,%subdatastat-upbytedropmbrexc-totgbr%,%subdatastat-
upbytedropmbrexc-totnongbr%,%subdatastat-totdownpktdropmbrexc%,%subdatastat-
downpktdropmbrexc-qci1%,%subdatastat-downpktdropmbrexc-qci2%,%subdatastat-
downpktdropmbrexc-qci3%,%subdatastat-downpktdropmbrexc-qci4%,%subdatastat-
downpktdropmbrexc-qci5%
```

#### pgw schema pgwSch8 format

```
EMS,PGW8,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%subdatastat-
downpktdropmbrexc-qci6%,%subdatastat-downpktdropmbrexc-qci7%,%subdatastat-
downpktdropmbrexc-qci8%,%subdatastat-downpktdropmbrexc-qci9%,%subdatastat-
downpktdropmbrexc-stdqcinongbr%,%subdatastat-downpktdropmbrexc-
stdqcigbr%,%subdatastat-downpktdropmbrexc-qcinongbr%,%subdatastat-
downpktdropmbrexc-qcigbr%,%subdatastat-downpktdropmbrexc-totgbr%,%subdatastat-
downpktdropmbrexc-totnongbr%,%subdatastat-totdownbytedropmbrexc%,%subdatastat-
downbytedropmbrexc-qci1%,%subdatastat-downbytedropmbrexc-qci2%,%subdatastat-
downbytedropmbrexc-qci3%,%subdatastat-downbytedropmbrexc-qci4%,%subdatastat-
downbytedropmbrexc-qci5%,%subdatastat-downbytedropmbrexc-qci6%,%subdatastat-
downbytedropmbrexc-qci7%,%subdatastat-downbytedropmbrexc-qci8%,%subdatastat-
downbytedropmbrexc-qci9%,%subdatastat-downbytedropmbrexc-
stdqcinongbr%,%subdatastat-downbytedropmbrexc-stdqcigbr%,%subdatastat-
downbytedropmbrexc-qcinongbr%,%subdatastat-downbytedropmbrexc-
qcigbr%,%subdatastat-downbytedropmbrexc-totgbr%,%subdatastat-downbytedropmbrexc-
totnongbr%,%apnambratelimit-uppktdrop%,%apnambratelimit-
downpktdrop%,%apnambratelimit-upbytedrop%,%apnambratelimit-downbytedrop%
```

#### mme schema mmeSch1 format

```
EMS,MME1,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%sess-
cur%,%emmevent-assoc-attempt%,%emmevent-assoc-success%,%emmevent-assoc-
```

```
failure%,%emmevent-auth-attempt%,%emmevent-auth-success%,%emmevent-auth-
failure%,%emmevent-iden-attempt%,%emmevent-iden-success%,%emmevent-iden-
failure%,%emmevent-sec-attempt%,%emmevent-sec-success%,%emmevent-sec-
failure%,%emmevent-x2ho-attempt%,%emmevent-x2ho-success%,%emmevent-x2ho-
failure%,%emmevent-s1ho-attempt%,%emmevent-s1ho-success%,%emmevent-s1ho-
failure%,%emmevent-tau-attempt%,%emmevent-tau-success%,%emmevent-tau-
failure%,%emmevent-detach-attempt%,%emmevent-detach-success%,%emmevent-detach-
failure%,%ecmevent-idlemode-attempt%,%ecmevent-idlemode-success%,%ecmevent-
idlemode-failure%,%ecmevent-srvcreq-attempt%,%ecmevent-srvcreq-
success%,%ecmevent-srvcreq-failure%,%ecmevent-paging-attempt%,%ecmevent-paging-
success%,%ecmevent-paging-failure%,%emmctrlmsg-sent-cleartext%,%emmctrlmsg-sent-
integrity%,%emmctrlmsg-sent-cipher%,%emmctrlmsg-sent-retrans%,%emmctrlmsg-sent-
failure%,%emmctrlmsg-recv-cleartext%,%emmctrlmsg-recv-integrity%,%emmctrlmsg-
recv-cipher%,%emmctrlmsg-recv-accept%,%emmctrlmsg-recv-discard%,%emmctrlmsg-
recv-denied%,%emmctrlmsg-recv-deocdefail%,%emmcalls-attach-currcall%,%emmcalls-
attach-maxcall%,%emmcalls-connect-currcall%,%emmcalls-connect-maxcall%,%emmcalls-
idle-currcall%,%emmcalls-idle-maxcall%
```

#### mme schema mmeSch2 format

```
EMS,MME2,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%emmdisc-
uedetach%,%emmdisc-pgwdetach%,%emmdisc-hssdetach%,%emmdisc-mmedetach%,%emmdisc-
implicitdetach%,%emmdisc-localabort%,%emmdisc-authfail%,%emmdisc-
subsparefail%,%emmdisc-otherreasons%,%esmevent-pdncon-attempt%,%esmevent-
pdncon-success%,%esmevent-pdncon-failure%,%esmevent-pdncon-discon-
attempt%,%esmevent-pdncon-discon-success%,%esmevent-pdncon-discon-failure%,%esmevent-
defbearact-attempt%,%esmevent-defbearact-success%,%esmevent-defbearact-
failure%,%esmevent-dedbearact-attempt%,%esmevent-dedbearact-success%,%esmevent-
dedbearact-failure%,%esmevent-beardeact-attempt%,%esmevent-beardeact-
success%,%esmevent-beardeact-failure%,%esmctrlmsg-sent-cleartext%,%esmctrlmsg-
sent-integrity%,%esmctrlmsg-sent-cipher%,%esmctrlmsg-sent-retrans%,%esmctrlmsg-
sent-failure%,%esmctrlmsg-recv-cleartext%,%esmctrlmsg-recv-
integrity%,%esmctrlmsg-recv-cipher%,%esmctrlmsg-recv-accept%,%esmctrlmsg-recv-
discard%,%esmctrlmsg-recv-denied%,%esmctrlmsg-recv-deocdefail%,%esmcall-attach-
currcall%,%esmcall-attach-maxcall%,%esmcall-connect-currcall%,%esmcall-connect-
maxcall%,%esmcall-idle-currcall%,%esmcall-idle-maxcall%,%esmdisc-
uedetach%,%esmdisc-pgwdetach%,%esmdisc-hssdetach%,%esmdisc-mmedetach%,%esmdisc-
implicitdetach%,%esmdisc-localabort%,%esmdisc-authfail%,%esmdisc-
subsparefail%,%esmdisc-otherreasons%,%sctp-transdata-init%
```

#### mme schema mmeSch3 format

```
EMS,MME3,%date%,%time%,%vpnnname%,%vpnid%,%servname%,%servid%,%sctp-transdata-
initack%,%sctp-transdata-shut%,%sctp-transdata-shutack%,%sctp-transdata-
cookie%,%sctp-transdata-cookieack%,%sctp-transdata-data%,%sctp-transdata-
dataack%,%sctp-transdata-shutcomp%,%sctp-transdata-hb%,%sctp-transdata-
hback%,%sctp-transdata-abort%,%sctp-transdata-error%,%sctp-recdata-init%,%sctp-
recdata-initack%,%sctp-recdata-shut%,%sctp-recdata-shutack%,%sctp-recdata-
cookie%,%sctp-recdata-cookieack%,%sctp-recdata-data%,%sctp-recdata-
dataack%,%sctp-recdata-shutcomp%,%sctp-recdata-hb%,%sctp-recdata-hback%,%sctp-
recdata-abort%,%sctp-recdata-error%,%sctp-retransdata-init%,%sctp-retransdata-
shut%,%sctp-retransdata-shutack%,%sctp-retransdata-cookie%,%sctp-retransdata-
cookieack%,%sctp-totsent-bytes%,%sctp-totrec-bytes%,%sctp-totsent-pkts%,%sctp-
totrec-pkts%,%slap-transdata-setupres%,%slap-transdata-setupresfail%,%slap-
```

```
transdata-reset%,%slap-transdata-resetack%,%slap-transdata-olstart%,%slap-
transdata-olstop%,%slap-transdata-mmedirinftra%,%slap-transdata-paging%,%slap-
transdata-erabsetupreq%,%slap-transdata-erabmodreq%,%slap-transdata-
erabrelcmd%,%slap-transdata-ctxtsetupreq%,%slap-transdata-uctxtrel%,%slap-
transdata-uctxtmod%,%slap-transdata-nastrans%,%slap-transdata-errorind%,%slap-
transdata-ho%,%slap-transdata-hoprepfail%,%slap-transdata-horeq%,%slap-
transdata-hocanack%
```

#### mme schema mmeSch4 format

```
EMS,MME4,%date%,%time%,%vpnname%,%vpnid%,%servname%,%servid%,%slap-transdata-
pathswreqack%,%slap-transdata-pathswreqfail%,%slap-transdata-dlinktunnel%,%slap-
transdata-tracestart%,%slap-transdata-deactivitrace%,%slap-transdata-
mmetrans%,%slap-recdata-setupreq%,%slap-recdata-reset%,%slap-recdata-
resetack%,%slap-recdata-enbdirinftrans%,%slap-recdata-erabsetupres%,%slap-
recdata-erabmodres%,%slap-recdata-erabrel%,%slap-recdata-ctxtsetupres%,%slap-
recdata-ctxtsetupfail%,%slap-recdata-uctxtrelreq%,%slap-recdata-
uctxtrelcomp%,%slap-recdata-uctxtmodres%,%slap-recdata-uctxtmodfail%,%slap-
recdata-iniuemsg%,%slap-recdata-ulinknastp%,%slap-recdata-nasnondelind%,%slap-
recdata-errorind%,%slap-recdata-horeqack%,%slap-recdata-hocancel%,%slap-recdata-
horequire%,%slap-recdata-hofail%,%slap-recdata-honotify%,%slap-recdata-
pathswreq%,%slap-recdata-enodebtransfer%,%slap-recdata-uecap%,%slap-recdata-
ulinktunnel%,%slap-recdata-tracefailind%
```

#### pdg schema pdgSch1 format

```
EMS,PDG1,%date%,%time%,%vpnname%,%vpnid%,%svcname%,%svcid%,%bindaddress%,%state%
,%sess-ttlcursess%,%sess-curact%,%sess-curdorm%,%sess-curactipv4%,%sess-
curdormipv4%,%sess-curactipv6%,%sess-curdormipv6%,%sess-curdiripipv4%,%sess-
curttgipv4%,%sess-ttldiripipv4%,%sess-ttlttgipv4%,%sess-diripipv4succ%,%sess-
diripipv4attempt%,%sess-diripipv4attemptfail%,%sess-ttgipv4succ%,%sess-
ttgipv4attempt%,%sess-ttgipv4attemptfail%,%sess-ttlsetup%,%sess-
ttlattempt%,%sess-ttlattemptfail%,%sess-ttldisc%,%sess-ttldisclocal%,%sess-
ttldiscremote%,%sess-discbeforeconn%,%sess-ttlfastreauthsucc%,%sess-
ttlfastreauthattempt%,%sess-ttlfastreauthattemptfail%,%sess-discipsec%,%sess-
discadmin%,%sess-discidletimeout%,%sess-discabstimeout%,%sess-
disclongdur%,%sess-discsesssetuptimeout%,%sess-discnonexistpcrf%,%sess-
discnoresource%,%sess-discauthfail%,%sess-discflowaddfail%,%sess-
discinvdestctx%,%sess-discsourceviol%,%sess-discgtp%,%sess-discdupreq%,%sess-
discaddrfail%,%sess-discmisc%,%sess-ttlbytessent%,%sess-ttlbytesrcvd%,%sess-
ttlpktsent%,%sess-ttlpktrcvd%,%eap-rxttlsrvrpasssthru%,%eap-
rxsuccsrvrpasssthru%,%eap-rxfailsrvrpasssthru%,%eap-rxchalsrvrpasssthru%,%eap-
txttlsrvr%,%eap-txinitrequest%,%eap-txreqfwd%,%eap-rxmobilepasssthru%,%mt-
txdatabyteuplink%,%mt-databyteuplinkdropped%,%mt-uldroppedd-
nonconnectedstate%,%mt-uldroppedd-transstackbufferoverflow%,%mt-uldroppedd-
incorrectdestip%,%mt-uldroppedd-transtackfailed%,%mt-uldroppedd-
sessnotfoundforsockid%,%mt-txdatabytedownlink%,%mt-rxttlopenreq%,%mt-
rxopenreqprocessed%,%mt-rxopenreqdropped%,%mt-txttlopenresp%,%mt-
txopenrespaccept%,%mt-txopenresprej%,%mt-rxopenresp%,%mt-rxttlnamreq%,%mt-
rxnamreqprocessed%,%mt-rxnamreqdropped%,%mt-txttlnamresp%,%mt-
txnamrespaccept%,%mt-txnamresprej%,%mt-rxnamresp%,%mt-rxttlauthreq%,%mt-
rxauthreqprocessed%,%mt-rxauthreqdropped%,%mt-txttlauthresp%
```

#### pdg schema pdgSch2 format

```
EMS,PDG2,%date%,%time%,%vpnname%,%vpnid%,%svcname%,%svcid%,%bindaddress%,%state%
```

```
, %mt-txauthrespaccept%, %mt-txauthresprej%, %mt-rxauthresp%, %mt-rxttlrecvreq%, %mt-
rxrecvreqprocessed%, %mt-rxrecvreqdropped%, %mt-txttlrecvresp%, %mt-
txrecvrespaccept%, %mt-txrecvresprej%, %mt-rxrecvresp%, %mt-rxttlclosereq%, %mt-
rxclosereqprocessed%, %mt-rxclosereqdropped%, %mt-txttlclosereq%, %mt-
txclosereqdispatch%, %mt-rxttlclosereq%, %mt-rxclosereqaccept%, %mt-
rxclosereqsprej%, %mt-rxclosereqspdropped%, %mt-txttlclosereq%, %mt-
txclosereqspaccept%, %mt-txclosereqsprej%, %mt-rxttlsendreq%, %mt-
rxsendreqprocessed%, %mt-rxsendreqdropped%, %mt-txttlsendreq%, %mt-
txsendreqdispatch%, %mt-rxttlsendresp%, %mt-rxsendrespaccept%, %mt-
rxsendresprej%, %mt-rxsendrespdropped%, %mt-txttlsendresp%, %mt-
txsendrespaccept%, %mt-txsendresprej%, %mt-openrejtx-cannotcreatconn%, %mt-
openrejtx-protonotsupported%, %mt-openrejtx-permdenied%, %mt-openrejtx-
cannotcreatesockid%, %mt-openrejtx-badparam%, %mt-openrejtx-addrport-
alreadyused%, %mt-openrejtx-cannotconnectserver%, %mt-openrejtx-
hostnameunknown%, %mt-openrejtx-authrequired%, %mt-openrejtx-undefined%, %mt-
openrejtx-reserved%, %mt-namrejtx-versionnotsupproted%, %mt-namrejtx-
servercannotcreateauth%, %mt-namrejtx-undefined%, %mt-namrejtx-reserved%, %mt-
authrejtx-authidunknown%, %mt-authrejtx-cannotconntoauthserver%, %mt-authrejtx-
badparam%, %mt-authrejtx-undefined%, %mt-authrejtx-reserved%, %mt-recvrejtx-
sockidunknown%, %mt-recvrejtx-connlost%, %mt-recvrejtx-permissiondenied%, %mt-
recvrejtx-undefined%, %mt-recvrejtx-ureserved%, %mt-closerejtx-sockidunknown%, %mt-
closerejtx-connlost%, %mt-closerejtx-undefined%, %mt-closerejtx-ureserved%, %mt-
closerejrx-sockidunknown%, %mt-closerejrx-connlost%, %mt-closerejrx-
undefined%, %mt-closerejrx-ureserved%, %mt-sendrejtx-sockidunknown%, %mt-sendrejtx-
connlost%, %mt-sendrejtx-permissiondenied%
```

pdg schema pdgSch3 format

```
EMS, PDG3, %date%, %time%, %vpnnname%, %vpnid%, %svcname%, %svcid%, %bindaddress%, %state%
, %mt-sendrejtx-badparam%, %mt-sendrejtx-undefined%, %mt-sendrejtx-reserved%, %mt-
sendrejrx-sockidunknown%, %mt-sendrejrx-connlost%, %mt-sendrejrx-
permissiondenied%, %mt-sendrejrx-badparam%, %mt-sendrejrx-undefined%, %mt-
sendrejrx-reserved%, %mt-pktdiscardstat-unknownversion%, %mt-pktdiscardstat-
unknownmsgtype%, %mt-msgdenied-open-decodefaildropped%, %mt-msgdenied-open-
decodefailrej%, %mt-msgdenied-open-uknownctxttdropped%, %mt-msgdenied-open-
uknownctxttrej%, %mt-msgdenied-respopen-decodefaildropped%, %mt-msgdenied-respopen-
uknownctxttdropped%, %mt-msgdenied-close-decodefaildropped%, %mt-msgdenied-close-
decodefailrej%, %mt-msgdenied-close-uknownctxttdropped%, %mt-msgdenied-close-
uknownctxttrej%, %mt-msgdenied-respclose-decodefaildropped%, %mt-msgdenied-
respclose-uknownctxttdropped%, %mt-msgdenied-nam-decodefaildropped%, %mt-msgdenied-
nam-decodefailrej%, %mt-msgdenied-nam-uknownctxttdropped%, %mt-msgdenied-nam-
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end
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